

10-23

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YL----- NATIONAL PARK

*File copy*

FILE NO. 143

MONTHLY REPORT

FOR

AUGUST - 1922.

143 - General  
(August - 1922)



September 8, 1922

Dear Sir:

The following is my report on conditions in the Yellowstone National Park and on the operation of the park for the month of August, 1922:

I. GENERAL CONDITIONS:

Aside from the fact that there was heavy travel through the park during the month nothing out of the ordinary happened that I should call attention to in the beginning of this report. The park was operated smoothly and efficiently and but few complaints were received. Most of these complaints were brought about by rather disgraceful actions of some of the drivers of the busses of the Transportation line. Their trouble arose out of the arrest, punishment and ejection from the park of the driver of car No. 18 of the transportation line, who, while driving recklessly, ran into a car driven by a Utah family, causing injury to the car and almost resulting in the death of the occupants of the automobile. The action of the United States Commissioner in fining the driver and my action in ordering his dismissal from the Service of the Transportation Company and his ejection from the park greatly angered many of the other drivers for the company who in seeking to retaliate, in many cases refused to give information regarding the park to their tourists and on one occasion attempted to organize a strike. These drivers also attempted to discriminate against the Camps Company and interfered with the evening program at the Lake Camp on several occasions because the officers of the Camps Company ordered that the bus drivers should not dance in their camp. Before the end of the month all of this trouble was settled by the dismissal of more than a dozen drivers. The names of these men will be



forwarded to transportation companies in other parks and an effort will be made to so blacklist them that they cannot again secure employment in any National Park.

Aside from this trouble with the drivers the transportation line was run efficiently throughout the month and excellent service was rendered the public.

In the hotels, not only during the month of August but through the season, the best service was rendered that so far as I know has ever been enjoyed by the traveling public in the history of the park. I am glad also to state that service far above the average of previous years has been rendered by the Camps Company. There has been a genuine effort on the part of public utilities and individual operators to cooperate with the Government in giving good service and these efforts have been rewarded to such an extent as to greatly reduce the number of complaints.

Labor during the month, while not over-abundant, was apparently plentiful. Occasionally, one of the government crews were short one or two men but it was not especially difficult to fill these vacancies. The Hotel Company and the Camps Company, both of whom are engaged in rather extensive improvement work, were able to secure whatever skilled and unskilled labor they needed. Conditions in the surrounding states are improving constantly.

I visited Livingston, Montana, on August 21st and had an opportunity at a luncheon of the Rotary Club and at a convention of the Y. C. B. Line Association to gain some impressions of business conditions in the State. Much optimism was expressed on all sides and there were particularly good reports regarding crops. On the 23rd of August I was in Ashton, Idaho, and found an optimistic spirit among business men there. Crops in Idaho were also as good as could be wished. Weather conditions have been ideal this summer for Idaho farming, particularly for dry land farming in that State. There has been a great deal of rain during the month which was helpful to the park as well as to the surrounding country. The rains cut down the fire hazard and also made it possible for much valuable work to be done in the dragging of roads.

#### Weather

The following weather records are quoted from the report for August of the Observer in charge of the local United States Weather Bureau at Mammoth Hot Springs, Park Headquarters:



Temperature: Monthly mean, 63.0°, is 2.1° above normal. There was a slight excess in temperature during the first three weeks, while the last week was considerably warmer than the seasonal average. The highest was 85° on the 18th and the lowest 40° on the 17th.

Precipitation: Total, 1.60 inches, is 0.58 inch above normal. About half the month's rainfall occurred during the first six days, but light thunder showers were frequent during the remainder of the month.

Snowfall: None.

Wind: Average hourly velocity 7.5 miles; normal 6.7. Maximum velocity, 44 miles from the southwest on the 20th, has been exceeded once and squalled once since the record began in 1904.

Sunshine: Percentage of possible 72; normal 71.

### Travel

The rail strike and general industrial depression throughout the country apparently has had very little effect on park travel. Prior to August 1st this has been a season of record-breaking, and August has kept up to all expectations.

A total of 38,097 people entered the park by the various entrances compared with 32,772 in August, 1921, and 33,958 in 1920. A detailed statement of park travel is attached to this report (See next page).

The season total to September 1st was 89,667.



DEPARTMENT OF THE INTERIOR.  
YELLOWSTONE NATIONAL PARK.

CHIEF RANGER'S MONTHLY TRAVEL REPORT, MONTH OF August, 1922

|                                                       | GARDINER.      |            | YELLOWSTONE. |            | SNAKE RIVER. |           | SYLVAN PASS. |            | SODA BUTTE. |         | SUMMARY.   |             |
|-------------------------------------------------------|----------------|------------|--------------|------------|--------------|-----------|--------------|------------|-------------|---------|------------|-------------|
|                                                       | Cars.          | People.    | Cars.        | People.    | Cars.        | People.   | Cars.        | People.    | Cars.       | People. | Cars.      | People.     |
| Permits issued                                        |                |            |              |            |              |           |              |            |             |         |            |             |
| Motorcycles                                           | 1914<br>13     | 6523<br>23 | 1856<br>8    | 6789<br>12 | 563<br>3     | 2080<br>5 | 2412<br>13   | 8162<br>20 |             |         | 6745<br>37 | 23554<br>60 |
| Permits issued (complimentary)                        | 10             | 34         | 7            | 23         | 8            | 30        | 5            | 14         |             |         | 30         | 101         |
| Cars entering second time                             | 93             | 318        | 139          | 507        | 146          | 479       | 75           | 272        |             |         | 453        | 1576        |
| Total                                                 | 2030           | 6898       | 2010         | 7331       | 720          | 2894      | 2505         | 8468       |             |         | 7265       | 25291       |
| Passengers in horse-drawn vehicles                    | Other          |            |              |            |              |           |              |            |             |         |            |             |
| Passengers on horseback                               | Transportation |            |              | 117        |              | 276       |              | 38         |             | 58      |            | 489         |
| Passengers on bicycles                                |                |            |              |            |              |           |              |            |             |         |            |             |
| Passengers on foot                                    |                |            |              |            |              |           |              |            |             |         |            |             |
| Total incoming passengers with private transportation | 2030           | 7015       | 2010         | 7607       | 720          | 2632      | 2505         | 8526       |             |         | 7265       | 25780       |
| WITH HIRED TRANSPORTATION.                            |                |            |              |            |              |           |              |            |             |         |            |             |
| Howstone Park Transportation Co.                      |                | 3479       |              | 6599       |              | 54        |              | 2185       |             |         |            | 12317       |
| Licenseses of personally conducted camping parties    |                |            |              |            |              |           |              |            |             |         |            |             |
| Livery licenses, short trips                          |                |            |              |            |              |           |              |            |             |         |            |             |
| Total incoming passengers with hired transportation   |                | 3479       |              | 6599       |              | 54        |              | 2185       |             |         |            | 12317       |
| TOTAL INCOMING PASSENGERS                             | 2030           | 10494      | 2010         | 14206      | 720          | 2686      | 2505         | 10711      |             |         | 7265       | 38097       |

Total automobiles in public camps

6. 10. 1922  
S. J. S.



DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
YELLOWSTONE NATIONAL PARK

1922 COMPARATIVE TRAVEL FIGURES WITH 1920 AND 1921  
MONTH OF AUGUST

AUGUST 1922

| ENTRANCE | RAIL<br>(People) |       | MOTOR |      | MISC.<br>People |     | TOTAL<br>(People) | TOTAL<br>(People) |
|----------|------------------|-------|-------|------|-----------------|-----|-------------------|-------------------|
|          | Hotels           | Camps | Rail  | Cars | People          |     | MONTH             | SEASON            |
| NORTH    | 1675             | 1804  | 3479  | 2030 | 6898            | 117 | 10494             | 27515             |
| WEST     | 3737             | 2862  | 6599  | 2010 | 7331            | 276 | 14206             | 33001             |
| EAST     | 999              | 1186  | 2185  | 2505 | 8468            | 58  | 10711             | 23839             |
| SOUTH    |                  |       | 54    | 720  | 2594            | 38  | 2686              | 5312              |
| TOTAL    | 6411             | 5852  | 12317 | 7265 | 25291           | 489 | 38097             | 89667             |

AUGUST 1921

| ENTRANCE | RAIL<br>(People) |       |      | MOTOR |        | MISC.<br>People | TOTAL<br>(People) | TOTAL<br>(People) |
|----------|------------------|-------|------|-------|--------|-----------------|-------------------|-------------------|
|          | Hotels           | Camps | Rail | Cars  | People |                 | MONTH             | SEASON            |
| NORTH    | 1657             | 1551  | 3208 | 1797  | 6239   | 93              | 9540              | 23697             |
| WEST     | 2639             | 2023  | 4662 | 1861  | 6973   | 71              | 11706             | 27414             |
| EAST     | 874              | 1093  | 1967 | 2191  | 7501   | 63              | 9531              | 20480             |
| SOUTH    |                  |       |      | 548   | 1961   | 34              | 1995              | 3376              |
| TOTAL    | 5170             | 4667  | 9837 | 6397  | 22674  | 261             | 32772             | 74967             |

AUGUST 1920

| ENTRANCE | RAIL<br>(People) | MOTOR<br>Cars | MISC.<br>People | TOTAL<br>(People) | TOTAL<br>(People) |
|----------|------------------|---------------|-----------------|-------------------|-------------------|
|          |                  |               |                 | MONTH             | SEASON            |
| NORTH    | 4124             | 1708          | 6059            | 53                | 10236             |
| WEST     | 6096             | 1722          | 6475            | 24                | 12595             |
| EAST     | 2081             | 2006          | 7132            | 38                | 9251              |
| SOUTH    |                  | 489           | 1866            | 10                | 1876              |
| TOTAL    | 12301            | 5925          | 21532           | 125               | 33958             |

TRAVEL RECORDS BROKEN IN 1922

Opening Day, June 20th, 1613 tourists. Previous Record 733 in 1920.  
 Rail Travel for single day. Record broken June 20th, when railroads delivered  
 Park gateways 1223 people. Previous record 665 on August 10, 1920.  
 Largest days entrance travel in history of Park, 1933 on July 23rd.  
 Largest days entrance travel in Aug. 1922 was 1957 on Aug. 7th, 743 of which  
 e in by rail.  
 Largest Party, Walther League, 481 entered West Yellowstone July 23rd.  
 Rail Travel for single gateway. Record broken July 23rd, by Union Pacific,  
 ch delivered 757 at West Entrance. Previous Record established by Northern  
 1920 on June 20, 1922, when 734 people arrived at North Gateway.  
 Total Travel of Season - 89667. Previous Record 74967 in 1921.  
 Rail Travel to date - 30052. Previous Record, 27052 in 1920.  
 Auto Travel to date - 58040. Previous Record, 50897 in 1921.



STATEMENT SHOWING AUTOMOBILE TRAVEL BY STATES  
YELLOWSTONE NATIONAL PARK  
AUGUST 1922

|                                                                   | NORTH |            | WEST |            | EAST |            | SOUTH |            | TOTAL      |                   |
|-------------------------------------------------------------------|-------|------------|------|------------|------|------------|-------|------------|------------|-------------------|
| OF STATE                                                          | Cars  | Passengers | Cars | Passengers | Cars | Passengers | Cars  | Passengers | Cars       | Passengers        |
| ma                                                                | 1     | 6          |      |            | 1    | 5          |       |            | 2          | 11                |
| na                                                                | 3     | 8          | 3    | 12         | 3    | 11         |       |            | 9          | 41                |
| sas                                                               | 1     | 4          | 3    | 9          | 10   | 37         | 7     | 35         | 21         | 85                |
| ornia                                                             | 161   | 478        | 191  | 595        | 78   | 247        | 17    | 47         | 447        | 1367              |
| ado                                                               | 27    | 78         | 28   | 81         | 193  | 619        | 55    | 171        | 303        | 959               |
| cticut                                                            | 2     | 5          | 3    | 9          | 5    | 18         |       |            | 10         | 32                |
| are                                                               |       |            |      |            |      |            |       |            |            |                   |
| of Col.                                                           |       |            | 5    | 16         | 2    | 6          |       |            | 7          | 22                |
| da                                                                | 4     | 10         | 2    | 5          | 3    | 9          |       |            | 9          | 24                |
| ia                                                                | 1     | 3          | 2    | 5          | 1    | 2          |       |            | 4          | 10                |
|                                                                   | 33    | 102        | 394  | 1594       | 11   | 31         | 116   | 524        | 554        | 2251              |
| ois                                                               | 85    | 269        | 16   | 53         | 117  | 401        | 14    | 47         | 232        | 770               |
| ana                                                               | 34    | 105        | 14   | 44         | 48   | 166        | 3     | 9          | 99         | 324               |
|                                                                   | 61    | 202        | 24   | 97         | 128  | 428        | 10    | 36         | 223        | 763               |
| as                                                                | 23    | 81         | 26   | 79         | 160  | 514        | 30    | 100        | 239        | 774               |
| ucky                                                              | 2     | 10         | 3    | 13         | 3    | 6          | 2     | 7          | 10         | 36                |
| siana                                                             | 1     | 7          | 1    | 6          | 4    | 11         | 2     | 8          | 8          | 32                |
|                                                                   |       |            |      |            | 2    | 5          |       |            | 2          | 5                 |
| land                                                              | 1     | 3          | 3    | 8          | 7    | 20         |       |            | 11         | 31                |
| achusetts                                                         | 9     | 26         | 7    | 21         | 12   | 37         |       |            | 28         | 84                |
| igan                                                              | 52    | 187        | 14   | 43         | 63   | 194        | 6     | 14         | 135        | 438               |
| esota                                                             | 89    | 289        | 6    | 28         | 84   | 287        | 1     | 2          | 180        | 606               |
| issippi                                                           | 1     | 2          | 2    | 5          | 3    | 14         |       |            | 6          | 21                |
| uri                                                               | 22    | 86         | 19   | 63         | 110  | 373        | 14    | 46         | 165        | 568               |
| ana                                                               | 702   | 2548       | 389  | 1459       | 205  | 749        | 4     | 10         | 1300       | 4766              |
| aska                                                              | 39    | 127        | 18   | 58         | 219  | 753        | 19    | 59         | 295        | 997               |
| da                                                                | 1     | 3          | 17   | 56         |      |            | 1     | 3          | 19         | 62                |
| Hampshire                                                         |       |            |      |            |      |            |       |            |            |                   |
| Jersey                                                            | 6     | 16         | 6    | 27         | 14   | 48         |       |            | 26         | 101               |
| Mexico                                                            |       |            | 2    | 8          | 4    | 16         | 1     | 2          | 7          | 26                |
| York                                                              | 25    | 79         | 8    | 24         | 43   | 113        | 3     | 12         | 79         | 228               |
| h Carolina                                                        |       |            | 1    | 4          | 1    | 2          |       |            | 2          | 6                 |
| h Dakota                                                          | 29    | 92         | 2    | 8          | 27   | 94         |       |            | 58         | 194               |
|                                                                   | 35    | 107        | 18   | 63         | 77   | 229        | 5     | 13         | 135        | 412               |
| homa                                                              | 13    | 49         | 20   | 70         | 112  | 404        | 12    | 47         | 157        | 570               |
| on                                                                | 68    | 213        | 72   | 244        | 12   | 32         | 4     | 12         | 156        | 501               |
| sylvania                                                          | 16    | 49         | 12   | 40         | 34   | 101        | 3     | 10         | 65         | 200               |
| e Island                                                          | 1     | 2          |      |            | 7    | 24         |       |            | 8          | 26                |
| h Carolina                                                        | 1     | 2          |      |            | 2    | 6          |       |            | 3          | 9                 |
| h Dakota                                                          | 60    | 201        | 5    | 12         | 65   | 220        | 2     | 6          | 132        | 439               |
| essee                                                             | 2     | 10         |      |            | 7    | 34         |       |            | 9          | 44                |
| as                                                                | 14    | 44         | 33   | 96         | 70   | 247        | 12    | 43         | 129        | 430               |
|                                                                   | 10    | 32         | 344  | 1336       | 8    | 23         | 96    | 359        | 458        | 1750              |
| mont                                                              |       |            |      |            | 1    | 4          |       |            | 1          | 4                 |
| ginia                                                             | 3     | 7          | 8    | 27         | 3    | 12         |       |            | 14         | 36                |
| hington                                                           | 172   | 619        | 91   | 301        | 41   | 148        | 4     | 21         | 308        | 1089              |
| t Virginia                                                        | 2     | 12         | 2    | 5          | 4    | 12         |       |            | 8          | 29                |
| consin                                                            | 59    | 208        | 11   | 32         | 55   | 167        | 5     | 13         | 129        | 420               |
| ning                                                              | 23    | 71         | 32   | 125        | 352  | 1268       | 123   | 454        | 530        | 1918              |
| ail                                                               | 2     | 8          |      |            | 1    | 3          |       |            | 3          | 11                |
| ada                                                               | 28    | 97         | 6    | 21         | 5    | 16         |       |            | 39         | 134               |
| T A L S                                                           | 1924  | 6557       | 1863 | 6812       | 2417 | 8176       | 571   | 2110       | 6775       | 23655             |
| Cars and Passengers entering second trip, unclassified            |       |            |      |            |      |            |       |            | 453        | 1576              |
| Motorcycles, unclassified                                         |       |            |      |            |      |            |       |            | 37         | 60                |
| Miscellaneous travel                                              |       |            |      |            |      |            |       |            |            | 489               |
| Grand Total All Cars and Passengers, classified and unclassified: |       |            |      |            |      |            |       |            | 7265       | 25780             |
| Total Automobile Travel for Season                                |       |            |      |            |      |            |       |            | 16232 cars | 59568 passengers. |



## II PERSONNEL

On August 1st there were 447 on the payrolls which had been increased on August 31st to 519. The following list shows the number of appointees of various classes serving during the month with a general statement of the kind of work in which they were engaged:

| <u>No.</u> | <u>Class</u>                    | <u>Kind of work Performed</u>                                                                                                                                                                                                                                          |
|------------|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1          | Superintendent                  | General administration and supervision of all activities in the park.                                                                                                                                                                                                  |
| 1          | Asst. Supt.                     | Administration, purchasing, disbursing. Promoted from Purchasing Clerk and Special Disbursing Agent on May 22, 1922.                                                                                                                                                   |
| 1          | Asst. Supt.                     | Information, reports, etc.                                                                                                                                                                                                                                             |
| 3          | Asst. Engineers                 | 1 in charge of engineering work in park, two assisting.                                                                                                                                                                                                                |
| 7          | Clerks                          | 1 Financial Clerk; 1 Cost Accounting Clerk; 1 Personnel, file and report clerk; 1 Time and Payroll Clerk; 2 Stenographer-Typists on stenographic work, information and miscellaneous work for superintendent; 1 Stenographer-Typist on orders, proposals and vouchers. |
| 1          | Park Naturalist                 | Scientific research work and developing museum.                                                                                                                                                                                                                        |
| 3          | Electricians                    | Operated power plant regular shift, including Sundays, read meters, did necessary line work.                                                                                                                                                                           |
| 4          | Foremen                         | 1 in charge of Headquarters Corral; 1 repairing sprinkler tanks along roads; two on construction.                                                                                                                                                                      |
| 1          | Telegraph Operator              | Sent and received all Government Western Union messages, operated one shift on telephone switchboard.                                                                                                                                                                  |
| 3          | Telephone Switchboard Operators | Operated telephone switchboard daily shifts, including Sundays.                                                                                                                                                                                                        |



|    |                                     |                                                                                                                                                                   |
|----|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | Master Mechanic                     | In charge of shops and of repair to heavy road machinery.                                                                                                         |
| 1  | Blacksmith                          | General blacksmith work, including shoeing horses in shop, overhauling and repairing tools and equipment.                                                         |
| 1  | Master Painter                      | General shop work, including painting equipment and buildings.                                                                                                    |
| 6  | Laborers                            | Teaming, freighting, assisting mechanics and miscellaneous work at headquarters.                                                                                  |
| 1  | Steward & Master of Transportation. | In charge of all transportation and of storehouses.                                                                                                               |
| 1  | Chief Buffalo Keeper                | In charge of tame buffalo herd.                                                                                                                                   |
| 2  | Asst. Buffalo Keepers               | 1 assisting Buffalo Keeper; 1 in charge of hay ranch operations at Slough Creek                                                                                   |
| 1  | Buffalo Herder                      | Assisting Buffalo Keeper                                                                                                                                          |
| 1  | Master Plumber                      | In charge of general plumbing and water and sewer systems.                                                                                                        |
| 3  | Auto Mechanics                      | 2 repairing motor trucks and touring cars. 1 on duty at power plant.                                                                                              |
| 1  | Carpenter                           | Repairing buildings at headquarters.                                                                                                                              |
| 1  | Chief Park Ranger                   | In charge of ranger force.                                                                                                                                        |
| 1  | Fish and Game Warden                | In charge special observation and reports on wild animals. In charge of certain trail work.                                                                       |
| 1  | 1st Asst. Chief Park Ranger         | In charge of northern district.                                                                                                                                   |
| 2  | Assts. Chief Park Ranger            | 1 on duty at Lake District; 1 on duty in Chief Ranger's Office.                                                                                                   |
| 13 | Park Rangers                        | Patrolling park borders, protecting game, policing up stations, repairing trails and bridges, fire look-out work, handling tourist traffic, miscellaneous duties. |



- |    |                    |                                                                                                                                                                                                                   |
|----|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 44 | Temporary Rangers  | Patrolling, handling tourist traffic, building trails, fire look-out, lecture, guide, information, on duty in Chief Ranger's Office, miscellaneous duties. (one ranger's services terminated end of August 19th). |
| 9  | W A E Park Rangers | 7 in charge of stations; 2 motorcycle patrol.                                                                                                                                                                     |

#### Leaves of Absence

Wm. H. Riley, Auto Mechanic, August 4-5, 2 days.  
 Helen E. McNutt, Stenog-Typist, August 12(noon)-12,  $\frac{1}{2}$  da.  
 Berenice J. Finney, Clerk, August 15, 1 day.  
 Berenice J. Finney, Clerk, August 21, 1 day.  
 Fred C. Finch, Ranger, August 25, 1 day.  
 Lucy Bilkert, Clerk, August 3-4, 2 days.  
 Peter Bilkert, Financial Clerk, August 3-4, 2 days.  
 Helen E. McNutt, Stenog-Typist, August 26-28, 2 days.  
 W. L. Bicket, Carpenter, August 1, (noon)-August 2,  $1\frac{1}{2}$  days.  
 Wm. H. Riley, Auto Mechanic, August 15-20, 5 days.

#### Sick Leave

Harry Marshall, Mechanic, August 4-7, 4 days.

#### Terminations

Wm. Wirt King, Jr., Temporary Park Ranger, \$960 per annum, plus increase of compensation, and quarters, effective close of August 31st, 1922.

Wm. Troutman, Temporary Park Ranger, \$1200 per annum, plus increase of compensation, and quarters, effective close of August 31st, 1922.

Edward H. Rynearson, Temporary Park Ranger, \$960 per annum, plus increase of compensation, and quarters, effective close of August 31st, 1922.

Roger Baker, Temporary Park Ranger, \$1200 per annum, plus increase of compensation, effective close of August 31st, 1922.

Edward F. Lathen, Temporary Park Ranger, \$960 per annum, plus increase of compensation effective close of August 31st, 1922.



Douglas McMurray, Temporary Park Ranger, \$1200 per annum, plus increase of compensation, and quarters, effective close of August 31st, 1922.

James D. Landsdowne, Temporary Park Ranger, \$960 per annum, plus increase of compensation, effective close of August 19, 1922.

#### Furloughs

Carrie O. Haunesser, Stenographer-Typist, \$1320 per annum, plus increase of compensation, on leave without pay, April 1st to September 30th, inclusive, 1922.

In addition to the regular employees listed above under appointment, the following were employed temporarily by the day:

|                   | <u>Aug. 1st</u> | <u>August 31st.</u> |
|-------------------|-----------------|---------------------|
| Mechanics         | 12              | 1                   |
| Painters          | 10              | 14                  |
| Cooks             | 37              | 36                  |
| 2-horse teamsters | 65              | 88                  |
| 4-horse teamsters | 30              | 29                  |
| Laborers          | 81              | 119                 |
| Skilled laborers  | 95              | 113                 |
| Plumbers          | 2               | 4                   |
|                   | <hr/>           | <hr/>               |
|                   | 332             | 404                 |
| Appointees        | <u>115</u>      | <u>115</u>          |
|                   | 447             | 519                 |

### III. WORK COMPLETED

#### (a) Construction of Physical Improvements

Trails: With the completion of the Howard Eaton Trail in August the majority of men engaged in trail construction were layed off. During the remainder of the month but four men were employed.

The following trails were built:



Two miles of trail around the Canyon  
Five miles of trail to Osprey Falls, and  
one mile to the foot of the Falls.

Dunraven Pass Improvement: The improvement of the road through Dunraven Pass, which was begun in the summer of 1919 and continued during the following seasons, was completed August 17th and the crew moved to another job. <sup>near</sup> Between the 1st and 17th of the month  $1\frac{1}{2}$  miles of ditch was blasted out of solid rock, three 12" C.I. culverts were placed and 200 feet of the roadway widened to 22 feet at the junction of the Mt. Washburn road. The 75 H-P caterpillar tractor and power grader were used to remove the rock from the ditches and smooth off the road surface. Eighteen men and three teams were used on the job.

West Thumb Auto Camp: Under the direction of Master Plumber Wiggins the important West Thumb automobile camp was completed during the month. A complete water system was installed and better provision made for the disposition of garbage. This camp now takes its place among the best of the Yellowstone Park system of automobile camp grounds and will doubtless be very popular with motorists because of the scenery and hot springs phenomena at the Thumb as well as opportunities for fishing there.

(b) Maintenance and Repair of Physical Improvements

The Yellowstone Park Hotel Company reports having installed a new boiler at the Old Faithful Hotel.

(c) Miscellaneous Improvement Work

The Yellowstone Park Hotel Company completed the wiring in the addition to the Lake Hotel; purchased and installed a new pump to increase the water supply and eliminate unsightly dam and pool in rear of Old Faithful engine room; installed a new boiler at Old Faithful; completed foundation for new drivers' wash-house; additional work done on new bunkhouse and new mess house at Lake; At Canyon, wreck of former foundation barn cleared away and remodeling of former livery barn for bunkhouse practically completed; and, at West Yellowstone considerable work was done on the old Yellowstone-Western Stage buildings with a view toward using them next year for the Transportation Company.

Haynes Picture Studio: Mr. J. E. Haynes, of the Haynes Studio, reports having recently completed the improvements to his Mammoth (headquarters) studio, namely, doubling the size and



trebling the capacity of the developing and printing department. Both shops at Tower Falls and Canyon were finished earlier in the season and pictures which have just recently been taken of them are attached to this report.

#### IV. WORK IN PROGRESS

##### (a) Construction of Physical Improvements

Graveling sections of the South Forest Road: The work of graveling sections of the South Forest Road which was begun in July was continued during the month. The gravel pit near Dime Creek, where surfacing material was obtained for the first section, proved to be full of large boulders, making it difficult and expensive to secure the gravel. As this was the only material obtainable in that vicinity it was decided to continue with it until the Dime Creek grade, three-quarters of a mile in length, was surfaced. This section was completed August 29th, and the following day a new pit one mile south of Dime Creek was opened. This new pit gives indications of being more economically operated than the first one, as very little stripping is required and the gravel is smaller and well graded.

In addition to the surfacing work, the roadway was considerably widened, side slopes were dressed down, a good ditch was made along the inside of the roadway and several corrugated iron culverts of 12 and 18 inches diameter were placed. One very wet stretch of road about 500 feet long was covered to a depth of 18 to 24 inches with large rock and gravel. All trees and brush taken from the gravel pit site and where the roadway was widened, was cut up and placed in piles to conform to the Forest Service regulations.

The average outfits on this work for the month were eleven teams and twenty men.

Graveling Sections of the South Entrance Roads: On August 20th, Foreman Enoch, with a crew of 5 teams and 11 men began graveling on the South Entrance Road between the 5 and 6 mile posts south of West Thumb. Gravel is secured in a pit near Cold Spring and loaded with one of the mechanical gravel loaders. At the end of the month the first section about three-quarters of a mile in length between the Continental Divide and Cold Spring was finished. The gravel is spread the full width of the roadway and about 4 inches deep.

Construction of Upper Basin Sewer System: Good progress was made during the month on this project, which was started



July 5th. The 20' x 25' sedimentation tank which will take care of sewage from Old Faithful Camp, is finished except for the placing of the chlorine machine and general cleaning up. 4800 feet of trench has been excavated an average depth of four feet; 2357 lin. feet of 6" sewer tile; 1192 lin. feet of 8" sewer tile and 534 lin. feet of 10" sewer tile has been placed in the trench and covered.

On August 21st work was resumed on the excavation for the 20' x 40' sedimentation tank. The material is all solid rock and filled with seams, through which hot water comes into the excavation at such a rate that it is necessary to keep an 8" centrifugal pump going all the time. Air hammers are used for drilling.

Lake Ranger Station and Community Building: Work on this structure was finished this month as far as practical this season. Due to the shrinkage of the green logs it was decided to allow them at least six months in which to dry before placing the cement chinking. The building is finished except the chinking, placing the windows and some inside work.

Parapets at the Needles: The parapet walls and guard rails work at the Needles were completed on August 6th. 21 log posts were planted and 320 lin. feet of 8" log guard rails were placed on the posts this month. The log posts and guard rails were painted with a heavy coat of creosote and oil for preservation. The work accomplished at the Needles this season is as follows: 110 perch of masonry retaining wall was built; 54 20" x 24" masonry piers constructed on the wall; 288 20" log posts planted 36" under ground; 4576 lin. feet of 8" guard rail were placed on piers and posts along canyon rim; 90 cubic yards of material was moved at 3 sharp points, eliminating sharp curvature and widening the roadway. In conjunction with this work 1 12" C.I. culvert 22' long was installed.

On August 7th this crew of one team and 6 men was moved to between the 4 mile and 5 mile posts on the Tower Falls road. The same type of post-guard rail was constructed at three dangerous points. 81 20" log posts were planted 36" in the ground, 30 of which were surrounded by concrete; 1136 lin. feet of 9" log guards were placed on the posts. At four places the roadway was widened. This work will be completed September 3rd.

Repairs to Penstock: The work of painting the steel penstock and placing it on concrete piers was continued during the month. The entire pipe, 2300 long, was painted with one coat of red lead. Fifty-five concrete piers were built, making 145 in all and thereby finishing that part of the job. Rock and other material excavated from under the pipe was hauled away or spread out and the entire job cleaned up to present a neat appearance.



(b) Maintenance and Repair of Physical Improvements

Sprinkling: Sprinkling operations were continued during the month, using for the purpose two auto-truck sprinklers, 2 two-horse sprinklers and 16 four-horse sprinklers. Due to the considerable rainfall, a good portion of the time sprinkling was not required, and the teams were used to haul road drags.

Repairs and Extension of the Sprinkling System: Foreman Ferrell with 6 men continued work during the month on the extension of sprinkling systems to include that section of road between Morris Junction and Virginia Cascades. One supply tank of 800 gallon capacity and 2 tanks of 1600 gallon capacity each were placed. A ditch about 2 miles in length was constructed to carry water to the new tanks. One new tank of 3000 gallon capacity was erected at Canyon Junction to furnish a great supply of water at that place. On August 31st the crew was ordered in to headquarters and disbanded as the season was too far advanced to begin any new work.

Road Maintenance: Two men with a team and dump wagon were employed at each of the following sprinkling stations to maintain the roads in their respective section: Beaver Lake, Madison Junction, Spring Creek, Dry Creek, West Thumb, Lake and Trout Creek.

Other maintenance crews were located on the following sections:

Mammoth: Five men and two teams. This crew maintained the roads in the vicinity of Mammoth, also the Bunsen Peak road. They graveled 2000 feet of road from the Gardiner River bridge to the top of the hill towards Tower Falls, 600 feet of road in Mammoth and 800 feet of the Gardiner road.

Excelsior Geyser: Four men and two teams. This crew devoted most of its time during the month graveling between Excelsior Geyser and Old Faithful. Nearly three miles of road was given a light covering of gravel.

Canyon: Five men and two teams. Two sharp points were removed on the Artist Point road, eliminating two dangerous curves. One 12" C.I. culvert 24' long was installed. Two hundred feet of ditch line was blasted out near the 5 mile post toward Dunraven Pass. One old log bridge was removed and the space filled with 16 cu. yards of gravel.

Virginia Meadows: Five men and two teams. 4000 lineal feet of road was graveled, requiring the hauling of 205 cubic yards of gravel for 2 miles. A considerable amount of sand was



removed from 300 feet of roadway. Partly exposed boulders were removed from the roadway in five places by blasting.

Dunraven Pass: Four men and two teams. General maintenance work was done. Two C.I. culverts were installed, one 18" in diameter and 20' long, and the other 12" in diameter and 24' long.

Tower Falls: Five men and two teams. Besides doing general maintenance work, about 1000 feet of road was fully graveled.

Cook City Road: Six men and three teams. This crew built two log diversion cribs each 6' x 10' along Soda Butte Creek near the Devil's Well, to protect the road from washing at that place. Four log culverts were replaced and two miles of graveling were completed. The entire Lamar Canyon section was widened two feet and boulders were removed at many places. Several points were blasted off to further improve the alignment of those places.

Blacktail Deer Creek: Five men and two teams. 2000 feet of roadway was graveled in that section, using for the purpose a disintegrated granite rock which has excellent cementing qualities and makes a splendid road surface. General maintenance work was also performed.

West Gallatin: Five men and two teams. This crew graded and repaired the road from the divide between Grayling Creek and the Northwest entrance to the Park, a distance of about 10 miles. They also rebuilt 3 six foot log culverts and re-decked with poles the 24' bridge over Bacon Bend Creek.

West Entrance: On August 21st a small camp was established at Madison River bridge and the power grader outfit began tearing up and grading off all the patches of oil macadam left between the Madison River bridge and the Riverside ranger station. By the end of the month two miles of this road had been repaired.

Turbid Lake: Five men and two teams maintained this section and widened the roadway in several places between the 10 and 11 mile posts from Lake Junction.

Cub Creek: Five men and two teams. This crew graveled several stretches of this section where needed and made a number of trips over it with the grader.



East Entrance: Five men and two teams. General maintenance work was performed and the entire section graded and repaired several times after hard rains.

Goff Creek: Six men and three teams. This crew spent the greater part of the month graveling different sections. Some grader work was also done.

Elk Fork: Two men and one team. General maintenance work was done and gravel put on several places.

Lewis River: Four men and two teams. Several pole culverts were replaced and repairs made to the bridges over Lewis River and Crawfish Creek. Ditches were dug to afford better drainage and the road graded over several times.

South Forest: Five men and two teams. This crew worked over the road between Arizona Creek and Moran. Ditches were made, culverts repaired and the road widened and shaped by grading.

(c) Miscellaneous Improvement Work

The Steward and Master of Transportation, with four helpers the greater part of the month, reports seven trucks delivering supplies at the sprinkler camps, road crews and ranger stations.

The Master Plumber, with an average of eight helpers throughout the month, did general repair and maintenance work on the sewer and water system at Mammoth Hot Springs and necessary interior plumbing; the piping of water to the Thumb public auto camp was completed; plumbing work was done in the new Lake Ranger Station and Community Center; and work was nearly completed on the comfort station at the Lake.

The Master Painter and his assistants, finished the outside of Mr. Hill's quarters; outside of corner building (known as Allan's shop); Community House; Ranger's Quarters; Morgue; Bilkerts' Quarters; Mess House; Judge Meldrum's Quarters, and the Canteen. All of these buildings were completed by placing two coats on the woodwork and one and two coats on the roofs. Roofs of two barrack buildings were painted also, two large stable buildings in rear of same, commissary building, storerooms of the Master of Transportation and the Electrician. The penstock was painted and scraped, receiving one coat of red lead. It is to be finished next spring with a final coat of paint. The outside of the new Lake and Old Faithful Ranger Stations and Community Centers were stained. 60 new steel signs were placed about the park. The Howard Eaton Trail signs and about 75 other wood signs were finished. Work is being



done on the inside of Harriott's new quarters, staining and varnishing woodwork and floors.

The Carpenter in charge, and his assistants devoted most of their time in the re-shingling of the roof of the Plumber's Shop, and did considerable work in the remodeling of a set of quarters for employees.

The Blacksmith and his helpers did considerable repairing of equipment and a good deal of horseshoeing.

The Mechanics completely overhauled one truck, did repair work on Signal Truck N P S No. 8, and did general repair work on the entire fleet. Considerable service work was done on heavy equipment out in the park. Motorcycles were kept in general repair throughout the month.

The Telephone System and Power Plant: were operated in the usual manner. The Power Plant was run constantly with the results shown in comparison for August 1921, as follows:

|                                       | <u>1921</u> | <u>1922</u> |
|---------------------------------------|-------------|-------------|
| Total current generated, in K W hours | 22,430      | 27,240      |
| Of this, sold to public utilities     |             |             |
| @ 5¢ per K W H                        | 8,261       | 6,834.37    |
| Consumed for street lighting          | 1,280       | 2,775       |
| Balance, consumed in Government       |             |             |
| buildings, for power & lighting and   | 12,879      | 17,630.63   |
| Lost on lines in transit              |             |             |
| Peak load during month in K W H       | 64          | 78          |

The Telephone and Switchboard Office was open daily from 6:30 A.M. to 12:00 P.M. (midnight). The total business handled was as follows:

#### Switchboard Calls

|                                        |            |
|----------------------------------------|------------|
| On Government local lines . . . . .    | 13,215     |
| On Hotel Company lines . . . . .       | 1,523      |
| On Long Distance Connections . . . . . | <u>262</u> |
| Total                                  | 15,120     |

#### Telegrams

|                           |     |
|---------------------------|-----|
| Government sent . . . . . | 146 |
| Commercial sent . . . . . | 156 |



|                               |           |
|-------------------------------|-----------|
| Government received . . . . . | 85        |
| Commercial received . . . . . | <u>72</u> |
| Total received                | 157       |

### Buildings and Corrals

Foreman McFarland: During the month three men were at work on the lawns. One man, with a team, devoted his entire time to cleaning the public automobile camp, one man drove a sprinkler team about headquarters and in the public automobile camp, and another worked in the barns and about headquarters.

### Improvements by Park Utilities

The Yellowstone Park Hotel Company: reports having started work on a new pole line between Norris and Canyon Junction; sewer lines at Lake started; the painting of Mammoth Hotel well under way - the front of the old building has been completely painted and the wing painted with two coats; at Old Faithful work has been started on the new girls' dormitory of 58 rooms; the Lake Hotel addition roof half completed, and lathers started on the top floor.

The Yellowstone Park Camps Company: reports the continuation of construction at all camps except Mammoth, where work was done earlier in the season. Additional tents are being erected at most of the camps.

### Haying Operations

Haying operations took up the major part of the month at Slough Creek, the Buffalo Ranch and Yanceys. Although it is yet too early to measure the hay in the stacks the following is a rough estimate of amounts put up at the various ranches:

|                              |                 |
|------------------------------|-----------------|
| Lower Slough Creek . . . . . | 220 tons        |
| Upper " " . . . . .          | 180 "           |
| Yanceys . . . . .            | 50 "            |
| Buffalo Ranch . . . . .      | 350 "           |
| Cardiner . . . . .           | 150 "           |
| Total                        | <u>950 tons</u> |

### Office Force

The office force was busy with the usual routine work which includes orders, payment of vouchers, preparation of accounts, reports, general correspondence, etc. 1232 pieces



of official mail were received and 1566 were sent out during the month.

### Sanitation

During the month of August Junior Assistant Sanitary Engineer A. F. Miller completed field work necessary for the design of a disposal plant for the Canyon Hotel, and the design was partially completed. The field work necessary for the design of a sewerage system and disposal plant for the Lake Junction was also completed.

Mr. Miller continued supervision of the operation of a disposal plant already installed at the Canyon permanent Camp and aided in the supervision of the construction of the sewerage system and disposal plants at the Upper Basin.

He also inspected creameries supplying milk to the park and continued bacteriological analyses of water supplies. A preliminary investigation for a new water supply was made for the Canyon Auto Camp. Several investigations of garbage dumps were made following same with recommendations concerning relocation.

### Forest Fires

Heavy rainfall during the month of August enabled rangers to keep the fire situation well in hand. Only one fire was reported during the month. On August 14th lightning struck a tree on the Cody road about one mile north of the 12-mile post. The resultant fire burned over about  $1\frac{1}{2}$  acres. The fire was in a very heavy timbered section and only prompt action on the part of the road crews and rangers at the Lake Station prevented it from reaching dangerous proportions.

#### (d) Service to the Public

Rangers, being in direct contact with the public, are called upon to render many different kinds of services to tourists. This includes guide work, information service, locating parties in the park, gathering information regarding lost and found articles and many other miscellaneous duties.

Guide Service: During the month a total of 10,916 persons visited the information office at headquarters, as compared to 10,820 in 1921 and 5,252 in 1920. The season totals are: 28,804 in 1922; 23,010 in 1921 and 9,092 in 1920.



Rangers detailed as guides conducted a total of 11,327 people over the formations at Old Faithful and 3,522 at Mammoth. A party was taken separately from the hotel and camp at Mammoth twice each day, but during the latter part of the month the numbers were so small that it was possible to consolidate them and use one guide only. Many private autoists made use of this service but the proportion is not very large due to the fact that the great majority of them would rather ride than walk.

It is interesting here to note that 5110 people went over Mt. Washburn, including yellow busses and private cars.

Information Office: One of the features of the Information Office work this summer has been the tremendous demand for the various government publications. Rangers handling the sale publications have a right to be proud of their sales during the past season as they will no doubt compare favorably with those of any other national park. Free publications of all kinds are exceedingly scarce in the park at present and some have given out entirely. The following is a statement of the sale publications to date:

| <u>Article</u>     | <u>Stock</u> | 1922              |                    |
|--------------------|--------------|-------------------|--------------------|
|                    |              | <u>Aug. Sales</u> | <u>Total Sales</u> |
| Portfolio          | 947          | 435               | 895                |
| Geological History | 697          | 141               | 697                |
| Geysers            | 1454         | 346               | 829                |
| Fossil Forests     | 663          | 219               | 471                |
| Fish               | 500          | 72                | 168                |
| Glimpses           | 494          | 130               | 246                |
| Bulletin 611       | 83           | 20                | 36                 |
| Bulletin 612       | 37           | 12                | 30                 |
| U.S.G.S. Maps      | 352          | 69                | 142                |
| Panoramic Views    | 193          | 46                | 106                |
| Haynes Guide       | 450          | 218               | 345                |
| Truthful Lies      | 825          | 84                | 184                |
| Elk                | 200          | 25                | 25                 |
| Prong Horn         | 50           | 20                | 20                 |
|                    | <hr/>        | <hr/>             | <hr/>              |
|                    | 6965         | 1837              | 4194               |

In addition to the above a total of 9,131 free publications have been distributed.



### Park Naturalist

Park Naturalist Skinner collected 30 specimens for the museum, installed 13 specimens, and made 17 typewritten labels. He spent considerable time re-arranging the exhibits to get the best effect, and to keep the botanical collection up to date; the time and effort so spent was increased in order to do the work without interfering with the constant stream of visitors. 32 letters on scientific subjects, and 67 Monthly Notes were sent out by mail. 6 lectures on "The Formation of Yellowstone Park", the "Whitebark Elk", "History", and "Indians" were given at various points. Studies that resulted in his notes on Seasonal Changes and on Natural Phenomena were made. Throughout the month, notes on birds, animals, flowers, and other natural objects were collected.

One evening was spent in the Information Bureau, and three evenings in the Museum. From August 5th to 15th, inclusive, was spent in a careful survey of the antelope situation, report and map submitted to the Superintendent.

Monthly notes on Flowers, Geology, Birds and Animals were prepared. 64 sets were posted and 3446 sets were given out. (Copies of these reports are attached hereto).

### V. WORK BEGUN

Comfort Stations: In connection with the general plan for providing better accommodations for campers at the public automobile camps, it is proposed this season to build three comfort stations, one at Yellowstone Lake camp and two at Old Faithful camp. The building at the Lake camp is now finished, except placing the toilet appliances which will be installed so as to be ready for use at the beginning of next season. The Lake building is 13' x 22' in size and the two at Old Faithful will be 17' by 25'. They are of log and frame construction and have concrete floors. Flush toilets and other modern fixtures will be installed. The concrete foundation for the buildings at Old Faithful are in place.

### VI. PLANS OR PROPOSED WORK

Ranger Service: September is essentially a month of preparation for winter. During this month wood will be cut and split, snowshoe rations placed, forage and winter supplies hauled and many other details arranged that must be completed before winter sets in.

The most ambitious project on hand this month is the building of the Cooke City Station, on Soda Butte Creek, just inside the East boundary of the park. The fact that the



ranger station has been 14 miles from the park boundaries in one of the most notorious poaching sections in the park, has been a handicap to the rangers ever since they were placed in the park. The station, which is to be built by ranger labor entirely, will enable a more intensive patrol to be made of these areas.

Roads: A short stretch of new road will be built along the Lake shore in order to isolate the Lake Permanent Camp which has been subject to annoyance and dust from heavy traffic passing through it.

Buildings: It is proposed also to build two small road maintenance stations in Dunraven Pass and at Cub Creek on the Cody Road in order to avoid purchasing new tents.

## VII. POLICIES

There were no changes in policy during the month.

## VIII. COST OF OPERATION

The following shows the status of the 1923 appropriation as of September 1, 1922:

|                                             |                   |
|---------------------------------------------|-------------------|
| Amount appropriated . . . . .               | \$561,800.00      |
| Reserved, 2% Fund . . . . .                 | 7,220.00          |
| Retirement Fund . . . . .                   | 1,061.50          |
| Expended to Sept. 1, 1922 . . . . .         | 92,585.51         |
| *Freight Liabilities . . . . .              | 5,105.08          |
| Book Liabilities to Sept. 1, 1922 . . . . . | 39,747.09         |
| Salaries & Wages to Sept. 1, 1922 . . . . . | 23,988.76         |
| Team Hire to Sept. 1, 1922 . . . . .        | 5,537.60          |
|                                             | <u>175,245.54</u> |
| Unobligated balance . . . . .               | 186,554.46        |
| Allotted for first quarter . . . . .        | 210,000.00        |
| Expenditures & Liabilities . . . . .        | <u>175,245.54</u> |
| Balance available for Sept.                 | 34,754.46         |

\* Liability greater than shown. Only estimated cost of B/L's giving weight shown.



The total expenditures during the month will be apportioned according to the Account Classification of Expenditures as soon as the expenditure report is completed.

#### IX. OTHER MATTERS OF INTEREST

##### Wild Animals

Game Conditions: All game is in excellent condition. Conditions throughout the month have been ideal as there was more than the normal amount of rainfall and the fact that the month was warmer than normal had a tendency to make all animals stay at higher altitudes than usual at this time of the year.

Buffalo, tame herd: The herd of 18 fine bulls has been on exhibition daily at Mammoth throughout the season. A small new corral was completed during the month to keep the animals in during the day.

The main herd has been grazing on the slopes of Mt. Norris and as far up the Lamar as Calfee Creek. Chief Buffalo Keeper Lacombe reports a total of 108 calves, and that the herd has scattered out a great deal more this summer than in other years which should prove beneficial to the herd. The buffalo have not been brought down for exhibition purposes at any time this season.

Buffalo, wild herd: No attempts have been made to keep any check on the wild herd as they usually range in a practically inaccessible country during the summer months and it is not thought wise to disturb them in any way as they are very wild and stampede at sight of man.

Bears: Bears have been more numerous than at any time during the past few years, and especially so, near Mammoth where they have caused considerable trouble by dumping over garbage cans. These visits are almost of nightly occurrence at most of the houses. Nearly all bears are exceedingly fat and are in excellent condition for fall. The usual numbers of black, brown and grizzlies appear on the dumps at Canyon and Lake, and on August 23rd three grizzlies were seen on the dump at Old Faithful which is the first appearance of grizzlies there for three years - since the dump was moved.

Antelope: Antelope are in good condition. There was



a large crop of kids last spring but probably did not quite offset the losses of the previous winter.

Deer: Deer have been observed in many parts of the park. During the coming month they will probably leave the higher altitudes and go down to the lower valleys, and by the 15th will no doubt be a common sight about the lawns at Mammoth.

Elk: Elk have continued at high altitudes during the month due to the warm weather and the fact that flies are at their worst during August. All elk observed are in excellent condition.

Mountain Sheep: None have been observed during the month, as they are ranging practically at the top of the highest mountains.

Moose: More moose have been seen in many parts of the park than is usual. Park Ranger Winn reports them as being numerous on the Upper Yellowstone and Park Ranger Burkett has seen several on the Sportsman Lake Trail. They have also been seen on Geode Creek and in many other parts of the park.

I regret to state that the Wyoming officials have authorized the sale of 50 more bull moose permits. Most of these bull moose will be killed in the Upper Yellowstone within the extension area and in our opinion will practically wipe out all of the bull moose in that section of the country. Issuing these permits to kill moose after the issuance of more than 50 licenses last year is a blow at game conservation that is wholly inexcusable and is merely a capitulation to demands of a small group of trappers and hunters who make their living by guiding rich men into the game country.

Smaller Animals: Woodchucks and ground squirrels have practically all hibernated and therefore few are seen, but they were numerous most of the month in all parts of the park. Woodchucks at the Canyon Camp were very tame, and were petted, photographed and fed by thousands of tourists.

Predatory Animals: Coyotes are very much in evidence at this time of the year as the pups have just begun to scatter. They will be intensively hunted and trapped during the coming fall and winter.

During the past summer Park Ranger Henry Anderson has been hunting out the summer haunts of park wolves and has succeeded in finding what he believes to be their main summer



range. This is in a section of the park that is practically inaccessible due to bog holes, rim rock, down timber and jack pines. The area is the part of the Mirror Plateau lying near the head of Timothy, Raven, Pelican and Broad Creeks. Ranger Anderson found numerous signs in this region and due to its inaccessibility and the fact that there is a large amount of game making its summer range near this point, there is no reason why the wolves should not find this an ideal summer home. Anderson will spend the remainder of the month in this locality in an attempt to exterminate as many of these predatory animals as possible.

### Fish and Fishing

Fish Planting: Below is a summary of fish planting during the season:

#### Fingerlings

##### Eastern Brook:

|           |                      |               |
|-----------|----------------------|---------------|
| June 30th | Lava Creek           | 12,000 ✓      |
| July 1st  | Blacktail Deer Creek | 12,000 ✓      |
| 2nd       | Glen Creek           | 12,000 ✓      |
| 2         | Indian Creek         | 12,000 ✓      |
| 3         | Willow Creek         | 36,000 ✓      |
| 3         | Swan Lake            | 12,000 ✓      |
| 5         | Willow Park          | 20,000 ✓      |
|           |                      | <hr/> 116,000 |

##### Native Trout:

|         |                   |          |
|---------|-------------------|----------|
| July 31 | Slough Creek      | 40,000 ✓ |
| 31      | Goode Creek       | 40,000 ✓ |
| Aug. 1  | Hellroaring       | 40,000 ✓ |
| 1       | Lamar             | 40,000   |
| 2       | Tower Creek       | 40,000   |
| 2       | Rose Creek        | 40,000   |
| 3       | Buffalo Creek     | 40,000   |
| 3       | Rose Creek        | 40,000   |
| 4       | Soda Butte        | 40,000   |
| 5       | Slough Creek      | 40,000   |
| 6       | Tower Creek       | 40,000   |
| 7       | Cold Spring Creek | 40,000   |
| 8       | Pebble Creek      | 40,000   |
| 9       | Fish Creek        | 40,000   |
| 10      | Elk Creek         | 40,000   |



|         |                                 |        |         |
|---------|---------------------------------|--------|---------|
| Aug. 11 | Geode Creek                     | 40,000 |         |
| 12      | Cold Spring Creek               | 40,000 |         |
| 14      | Opal Creek                      | 40,000 |         |
| 15      | Creek between Opal<br>and Flint | 40,000 |         |
| 16      | Flint Creek                     | 40,000 |         |
|         |                                 |        | 800,000 |

#### Rainbow Trout:

|         |                   |        |         |
|---------|-------------------|--------|---------|
| Aug. 17 | Gibbon River      | 40,000 |         |
| 18      | Solfatara Creek   | 40,000 |         |
| 19      | Little Firehole   | 24,000 |         |
| 19      | Spring Creek Lake | 16,000 |         |
|         |                   |        | 120,000 |

#### Fry

#### Native Trout:

|         |                                  |         |           |
|---------|----------------------------------|---------|-----------|
| July 22 | Pelican Creek &<br>miscellaneous | 50,400  |           |
| Aug. 4  | Crawfish Creek                   | 75,000  |           |
| 5       | Thumb Stream                     | 28,000  |           |
| 5       | Gub & Clear Creeks               | 75,000  |           |
| 8       | South Fork Bechler Riv.          | 75,000  |           |
| 10      | Cascade & Chip. Cr.              | 90,000  |           |
| 10      | North Fork Bechler Rv.           | 55,000  |           |
| 11      | Cascade Creek                    | 80,000  |           |
| 11      | Otter Creek                      | 115,000 |           |
| 12      | Aster Creek                      | 75,000  |           |
| 12      | Delusion Lake                    | 14,000  |           |
| 14      | Aster Creek                      | 75,000  |           |
| 16      | Cascade Creek                    | 105,000 |           |
| 17      | Lake Creek                       | 105,000 |           |
| 18      | Middle Creek                     | 70,000  |           |
| 18      | Pole Cat Creek                   | 105,000 |           |
| 18      | Pole Cat Creek                   | 70,000  |           |
| 19      | Cascade Creek                    | 70,000  |           |
| 19      | Middle Creek                     | 105,000 |           |
| 21      | Fish Lake                        | 126,000 |           |
| 21      | Hatchery Creek                   | 69,000  |           |
|         |                                  |         | 1,642,400 |

#### Eyed Eggs

#### Native Trout:

|         |          |         |
|---------|----------|---------|
| July 14 | Thumb #1 | 122,000 |
|---------|----------|---------|



|         |                                 |         |           |
|---------|---------------------------------|---------|-----------|
| July 18 | Bridge Creek                    | 157,000 |           |
| 18      | Thumb #2                        | 248,700 |           |
| 19      | Cub Creek                       | 137,200 |           |
| 19      | Clear Creek                     | 248,000 |           |
| 21      | Flat Mountain Arm               | 418,000 |           |
| 22      | Pelican Creek                   | 471,000 |           |
| 24      | Solution Creek                  | 491,500 |           |
| 26      | Southeast Arm,<br>three streams | 417,000 |           |
| 27      | Chipmunk Creek                  | 850,000 |           |
| 29      | Clear Creek                     | 403,000 |           |
| 29      | Cub Creek                       | 433,000 |           |
| 30      | Mountain Creek                  | 265,000 |           |
| 31      | Grouse Creek                    | 530,000 |           |
| Aug. 1  | Columbine Creek                 | 230,000 |           |
| 1       | Bechler River                   | 195,000 |           |
| 4       | Stream in South Arm             | 25,000  |           |
| 10      | Proposition Creek               | 100,000 |           |
|         |                                 |         | 5,731,400 |

#### Analysis of Fish Planting

##### Fingerlings:

|                     |           |                  |
|---------------------|-----------|------------------|
| Eastern Brook Trout | 116,000   |                  |
| Native Trout        | 1,000,000 |                  |
| Rainbow             | 120,000   |                  |
|                     |           | <u>1,036,000</u> |
|                     |           | 1,236,000        |

##### Fry:

|              |                  |           |
|--------------|------------------|-----------|
| Native Trout | <u>1,642,400</u> | 1,642,400 |
|--------------|------------------|-----------|

##### Eyed Eggs:

|              |                  |           |
|--------------|------------------|-----------|
| Native Trout | <u>5,731,400</u> | 5,731,400 |
|--------------|------------------|-----------|

|       |                         |
|-------|-------------------------|
| Total | <u><u>8,409,800</u></u> |
|-------|-------------------------|

#### Total Plants by Species

|                     |           |                         |
|---------------------|-----------|-------------------------|
| Eastern Brook Trout | 116,000   |                         |
| Rainbow Trout       | 120,000   |                         |
| Native Trout        | 8,373,800 |                         |
| Total               |           | <u><u>8,609,800</u></u> |



Fish Planted by Various Government Departments:

National Park Service:

|                           |                      |                  |
|---------------------------|----------------------|------------------|
| Eastern Brook Fingerlings | 116,000              |                  |
| Rainbow Fingerlings       | 120,000              |                  |
| Native Fingerlings        | <del>1,000,000</del> |                  |
| Native Fry                | 1,421,400            |                  |
| Native Eyed Eggs          | 295,000              |                  |
|                           |                      | <u>2,952,400</u> |

Bureau of Fisheries:

|                        |           |                  |
|------------------------|-----------|------------------|
| Native Trout Fry       | 221,000   |                  |
| Native Trout Eyed Eggs | 5,436,400 |                  |
|                        |           | <u>5,657,400</u> |

|                                      |                             |
|--------------------------------------|-----------------------------|
| Total Plant in Park Waters . . . . . | <u><del>2,429,000</del></u> |
|                                      | 8,609,800                   |

Note: In addition to the above out-of-park shipments totalling 5,548,500 native trout were made by the Bureau of Fisheries.

Fishing: Records show that a total of 15,997 fish were taken from park waters during the month of August, and this number does not include fish caught by rail tourists.

Seasonal Changes

Botanical: Grasses and other forage crops were much benefited on meadows above 7000 feet elevation by the rains of July and August; but these rains came 600 late for the forage below 6000 feet elevation.

While most of our summer and autumn flowers were in bloom throughout the Park at the beginning of the month, the number and variety steadily declined until at the end only Sunflowers, Goldenrod, and Rabbit Bush were in bloom below 6000 feet; Rocky Mountain Bee Plants, Sayless Cone flowers, and Purple Asters near Mammoth; and a few Fireweed, Buttercups, Yarrow, Fringed Gentians, Purple Asters,



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

MONTHLY METEOROLOGICAL SUMMARY.

station, YELLOWSTONE PARK, WYO. ; month, AUGUST, 1922., 19

| TEMPERATURE.<br>(Degrees Fahrenheit.) |      |       | Precipitation.<br>(In inches and hundredths.) | Character of day. | Sunshine, percent-<br>age. | ATMOSPHERIC PRESSURE.<br>(Reduced to sea level; inches and hundredths.) |        |
|---------------------------------------|------|-------|-----------------------------------------------|-------------------|----------------------------|-------------------------------------------------------------------------|--------|
| Max.                                  | Min. | Mean. |                                               |                   |                            | Mean                                                                    | lowest |
| 81                                    | 57   | 69    | .34                                           | Cloudy            | 50                         | 29.98                                                                   | 26     |
| 71                                    | 52   | 62    | .23                                           | Cloudy            | 23                         | 30.32                                                                   | 13     |
| 70                                    | 54   | 62    | .06                                           | Cloudy            | 21                         | 29.66                                                                   |        |
| 70                                    | 56   | 63    | .01                                           | PtCldy            | 76                         |                                                                         |        |
| 75                                    | 49   | 62    | 0                                             | Clear             | 87                         |                                                                         |        |
| 72                                    | 43   | 58    | .16                                           | PtCldy            | 68                         |                                                                         |        |
| 78                                    | 45   | 62    | 0                                             | PtCldy            | 72                         |                                                                         |        |
| 79                                    | 43   | 61    | 0                                             | PtCldy            | 69                         |                                                                         |        |
| 84                                    | 48   | 66    | .10                                           | PtCldy            | 60                         |                                                                         |        |
| 71                                    | 54   | 62    | .15                                           | Clear             | 92                         |                                                                         |        |
| 77                                    | 50   | 64    | 0                                             | Clear             | 100                        |                                                                         |        |
| 77                                    | 50   | 64    | T                                             | Clear             | 100                        |                                                                         |        |
| 76                                    | 46   | 61    | 0                                             | Clear             | 98                         |                                                                         |        |
| 79                                    | 48   | 64    | .04                                           | PtCldy            | 61                         |                                                                         |        |
| 75                                    | 47   | 61    | 0                                             | Clear             | 96                         |                                                                         |        |
| 78                                    | 43   | 60    | 0                                             | Clear             | 100                        |                                                                         |        |
| 82                                    | 40   | 61    | 0                                             | Clear             | 100                        |                                                                         |        |
| 85                                    | 46   | 66    | T                                             | PtCldy            | 71                         |                                                                         |        |
| 75                                    | 56   | 66    | .12                                           | Cloudy            | 39                         |                                                                         |        |
| 76                                    | 49   | 62    | .09                                           | PtCldy            | 82                         |                                                                         |        |
| 71                                    | 47   | 59    | .02                                           | PtCldy            | 42                         |                                                                         |        |
| 72                                    | 49   | 60    | .02                                           | PtCldy            | 57                         |                                                                         |        |
| 77                                    | 50   | 64    | 0                                             | Clear             | 98                         |                                                                         |        |
| 81                                    | 49   | 65    | 0                                             | Clear             | 100                        |                                                                         |        |
| 83                                    | 50   | 66    | 0                                             | Clear             | 96                         |                                                                         |        |
| 83                                    | 44   | 64    | 0                                             | Clear             | 100                        |                                                                         |        |
| 83                                    | 55   | 69    | 0                                             | PtCldy            | 78                         |                                                                         |        |
| 80                                    | 51   | 66    | .05                                           | PtCldy            | 61                         |                                                                         |        |
| 76                                    | 54   | 65    | .12                                           | Cloudy            | 53                         |                                                                         |        |
| 74                                    | 56   | 65    | T                                             | PtCldy            | 54                         |                                                                         |        |
| 67                                    | 47   | 57    | .09                                           | Cloudy            | 42                         |                                                                         |        |
| 76.7                                  | 49.3 | 63.0  | 1.60                                          |                   | 72                         |                                                                         |        |

|        |       |         |       |      |    |
|--------|-------|---------|-------|------|----|
| Mean   | 29.98 | highest | 30.32 | date | 26 |
| lowest | 29.66 | date    | 13    |      |    |

|                      |    |      |    |        |    |      |    |
|----------------------|----|------|----|--------|----|------|----|
| Highest              | 85 | date | 18 | lowest | 40 | date | 17 |
| Greatest daily range | 42 | date | 17 |        |    |      |    |
| Least daily range    | 14 | date | 4  |        |    |      |    |

|                                                                                      |      |       |    |    |    |    |    |
|--------------------------------------------------------------------------------------|------|-------|----|----|----|----|----|
| Mean for this month in                                                               |      |       |    |    |    |    |    |
| 1871                                                                                 | 80   | 89    | 64 | 98 | 63 | 07 | 56 |
| 1872                                                                                 | 81   | 90    | 61 | 99 | 57 | 08 | 57 |
| 1873                                                                                 | 82   | 91    | 62 | 00 | 61 | 09 | 63 |
| 1874                                                                                 | 83   | 92    | 61 | 01 | 63 | 10 | 57 |
| 1875                                                                                 | 84   | 93    | -- | 02 | 59 | 11 | 56 |
| 1876                                                                                 | 85   | 94    | 68 | 03 | 61 | 12 | 56 |
| 1877                                                                                 | 86   | 95    | 62 | 04 | 60 | 13 | 61 |
| 1878                                                                                 | 87   | 96    | 61 | 05 | 62 | 14 | 59 |
| 1879                                                                                 | 88   | 97    | 61 | 06 | 59 | 15 | 61 |
| Normal for this month                                                                | 60.9 |       |    |    |    |    |    |
| Absolute maximum for this month for                                                  | 36   | years | 93 |    |    |    |    |
| Absolute minimum for this month for                                                  | 35   | years | 23 |    |    |    |    |
| Average daily excess (+) or deficiency (-) of this month as compared with the normal | #2.1 |       |    |    |    |    |    |
| Accumulated excess (+) or deficiency (-) since January 1                             | -470 |       |    |    |    |    |    |
| Average daily excess (+) or deficiency (-) since January 1                           | -1.9 |       |    |    |    |    |    |

|                                                                        |       |          |      |    |      |    |      |
|------------------------------------------------------------------------|-------|----------|------|----|------|----|------|
| PRECIPITATION.                                                         |       |          |      |    |      |    |      |
| Total this month                                                       | 1.60  | snowfall | 0    |    |      |    |      |
| Greatest precipitation in 24 hours                                     | 0.38  | date     | 1-2  |    |      |    |      |
| Snow on the ground at end of month                                     | 0     |          |      |    |      |    |      |
| Total precipitation this month in                                      |       |          |      |    |      |    |      |
| 1871                                                                   | 80    | 89       | 0.64 | 98 | 2.05 | 07 | 0.90 |
| 1872                                                                   | 81    | 90       | 1.77 | 99 | 2.23 | 08 | 3.42 |
| 1873                                                                   | 82    | 91       | 1.22 | 00 | 0.29 | 09 | 0.70 |
| 1874                                                                   | 83    | 92       | 0.64 | 01 | 1.65 | 10 | 0.52 |
| 1875                                                                   | 84    | 93       | 1.06 | 02 | 0.61 | 11 | 0.66 |
| 1876                                                                   | 85    | 94       | 1.75 | 03 | 0.45 | 12 | 1.66 |
| 1877                                                                   | 86    | 95       | 0.72 | 04 | 1.11 | 13 | 1.58 |
| 1878                                                                   | 87    | 96       | 0.37 | 05 | 0.32 | 14 | 0.20 |
| 1879                                                                   | 88    | 97       | 0.57 | 06 | 1.47 | 15 | 1.53 |
| Normal for this month                                                  | 1.02  |          |      |    |      |    |      |
| Excess (+) or deficiency (-) of this month as compared with the normal | 40.58 |          |      |    |      |    |      |
| Accumulated excess (+) or deficiency (-) since January 1               | -4.31 |          |      |    |      |    |      |

|                                      |    |         |    |
|--------------------------------------|----|---------|----|
| MEAN RELATIVE HUMIDITY (Percentage). |    |         |    |
| 6 a. m.,                             | 74 | 12 noon | 38 |
| 6 p. m.,                             | 43 |         |    |

|                                     |                            |
|-------------------------------------|----------------------------|
| WIND.                               |                            |
| Prevailing direction                | SOUTH                      |
| total movement                      | 5558 miles;                |
| average hourly velocity             | 7.5                        |
| maximum velocity (for five minutes) | 44 miles per hour, from SW |
| on                                  | 20                         |

|                                                       |    |
|-------------------------------------------------------|----|
| WEATHER.                                              |    |
| Number of days, clear                                 | 12 |
| partly cloudy                                         | 13 |
| cloudy                                                | 6  |
| on which .01 inch, or more, of precipitation occurred | 15 |

|                                     |                                            |
|-------------------------------------|--------------------------------------------|
| MISCELLANEOUS PHENOMENA (dates of). |                                            |
| Auroras                             | 0                                          |
| halos: solar                        | 0                                          |
| lunar                               | 0                                          |
| Hail                                | 20                                         |
| sleet                               | 0                                          |
| fog                                 | 0                                          |
| Thunderstorms                       | 1, 2, 3, 6, 9, 14, 18, 19, 20, 21, 28, 29, |
| *Frost: light                       | ---                                        |
| heavy                               | ---                                        |
| killing                             | ---                                        |

NOTE.—"T" indicates trace of precipitation.  
The autumn frosts are not recorded after the occurrence of "killing," except in Florida and along the immediate coast of the Gulf of Mexico.

E. H. Fletcher, Observer.

Weather Bureau.



U. S. DEPARTMENT OF AGRICULTURE.

WEATHER BUREAU.

## MONTHLY

## METEOROLOGICAL SUMMARY.

STATION

Yellowstone Park, Wyo.

MONTH

AUG

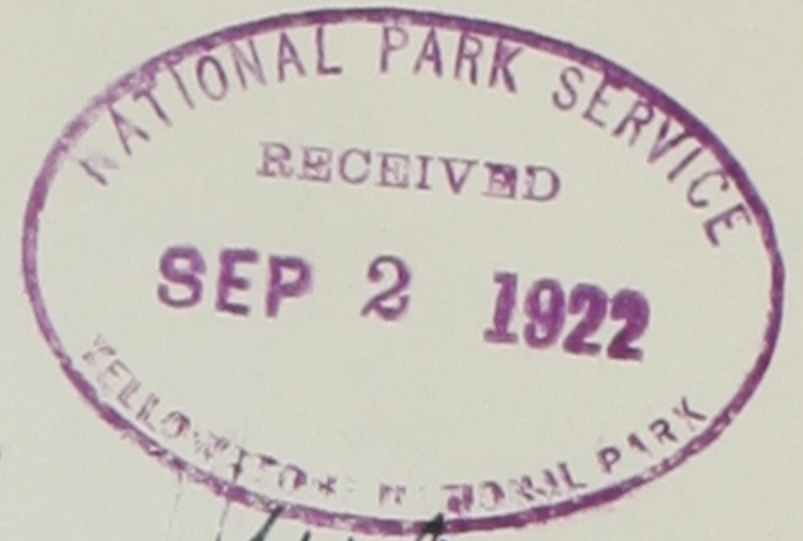
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U. S. DEPARTMENT OF AGRICULTURE  
WEATHER BUREAU  
Yellowstone Park, Wyo.



WEATHER CONDITIONS--MAMMOTH HOT SPRINGS.

AUGUST, 1922.

The month was warmer than normal with frequent thunderstorms, resulting in an excess of precipitation.

Temperature:

Monthly mean, 63.0°, is 2.1° above normal. There was a slight excess in temperature during the first three weeks, while the last week was considerably warmer than the seasonal average. The highest was 85° on the 18th and the lowest 40° on the 17th.

Precipitation:

Total, 1.60 inches, is 0.58 inch above normal. About half the month's rainfall occurred during the first six days, but light thundershowers were frequent during the remainder of the month.

Snowfall:

None.

Wind:

Average hourly velocity 7.5 miles; normal 6.7. Maximum velocity, 44 miles from the southwest on the 20th, has been exceeded once and equalled once since the record began in 1904.

Sunshine:

Percentage of possible 72; normal 71.

E. H. Fletcher,  
Observer, Weather Bureau.

*Mountain report.*



Harebell, lupine, and Cost Dandelions on the Park Plateau. No flowers at all remain above timberline.

Although many of our flowers stopped blooming earlier than usual - Geraniums, lupines, Fireweed, Montsella, Yarrow, Harebell, and Snapdragons - it was noticeable that the rains gave a new lease of life to many plants, and gave us more Fringed Gentians than we have ever had in August before. Rayless Cone flowers were very numerous near Mammoth, at East Entrance, and near Roaring Mountain.

The last blossoms seen were: August 7th, Granesbill; 9th, Fireweed at 6000 feet and Blue-eyed Grass; 10th, Little Elephants, Wintergreen, and Beardtongue; 12th, Sulphur Plants, Red Monkey flowers, lungwort, and Columbine; 15th, Yellow Monkey flowers; 17th, Wild Parsnip; 22nd, two sprays of Monkshood, Yellow Water Lilies, and only a few Paint Brush; 23rd, Wild Buckwheat, Geranium, two sprays of Tall Larkspur, and only a few Stonecrop. 25th, Wild Carrots and Yarrow. On the 17th Harebells were still common but declined rapidly by the 24th, after disappearing below 6000 feet by the 5th; Cinquefoil was noticeably less by the 20th, and lupine by the 24th.

Elderberries and raspberries were ripe near Mammoth on the 8th and in the Hoodoos on the 22nd. Hackleberries were common in spots on the 14th. Snow berries were first seen on the 27th.

A remarkable bed of two acres of Fireweed seen near the Buffalo Ranch on the 14th; Purple Asters in solid masses on Prospect Peak on the 15th.

Bushes began showing autumn colors on the 20th and Baneberry turned yellow on the 24th

#### Birds:

Migration: Aug. 1st, Magpies began coming up from the plains; 4th, first Pine Grosbeak seen; 6th, numbers of Marsh Hawks appeared; 7th, Bluebirds began to move and Nuthackers came in



from the north; 14th, pipits first seen; 26th, Northern Shrikes appeared; on the 8th the first ducks from outside were seen, although the ducks began to congregate about the 18th, it was not until the 26th that the increase became marked; Cliff Swallows began to leave on the 17th-20th although a few remained until the 23rd.

Contrary to their usual custom, Meadowlarks, Kingbirds, and Pink-sided Juncos were heard singing at times during August.

First mallard drakes to assume winter plumage noted on the 11th.

The Brew Blackbirds did not gather so much about Mammoth as usual but the Pink-sided Juncos began to gather on the 18th.

The young Osprey left Eagle Nest Rock on the 17th.

A big crop of cedar berries should attract many winter birds later and afford many a bird feast on cold days next spring.

Animals: Pine Squirrels were seen storing fir cones as early as the 13th. Jack Rabbits began turning white on the 19th. Woodchucks and Ground Squirrels were still numerous on the 10th, but began noticeably to enter hibernation by the 22nd.

From the above data, the season is now four days earlier than the average, and there are a few signs of an early approach of winter.

#### Phenomena

At Mammoth Hot Springs: Hymen Terrace is gaining in activity. Palette Spring and Minerva Terrace are the same as reported on August 1st. Cleopatra Terrace is prettier than ever. The new spring on the northern part of Marble Terrace is increasing and spreading; already there is considerable silky algae 8-9 inches long, showing its rapid development. The new spring near Cupid's cave is developing and the color spreading. Marrow



Guage Terrace and Orange Spring remain the same as reported August 1st. The White Elephant, Dedolph Spring, Stygian Cave, Bath Lake, Devil's Kitchen, and Angel Terrace remain normal and as reported on August 1st. The springs above Jupiter Terrace remain normal but the Terrace continues to build up rapidly. Mound Terrace and Pulpit Terrace remain the same as on August 1st.

On August 14th, one of the Roadside Springs had a violent spasm, threw out large quantities of rock and mud and deluged the road. It quieted down to quite an extent for a time but has since become quite active. On August 19th I wrote you a letter giving complete details regarding the outbreak of this geyser. Attached hereto is a second report gotten out for newspaper publicity.

At Norris Geyser Basin: The Whirligig, Constant, Bathtub, New Crater, Minute Man, the geyser near the Black Crowler, and the Cinder Pool are all operating normally and as reported July 1st. The Valentine geyser played only once or twice; the Mud Boiler has become uncertain; and the Monarch geyser has not played at all.

At the Lower Geyser Basin; all features remain as reported on June 1st. The Fountain geyser has not played again.

At the Upper Geyser Basin: Old Faithful geyser is playing with an average interval of 63 minutes; extreme intervals were 40 minutes and 79 minutes. The Daisy has shortened its interval from 77 minutes to an average of 75 minutes. The Grand played from 9 $\frac{1}{2}$  to 14 $\frac{1}{2}$  hours with an average interval just under 11 hours. Neither the Giantess nor the Beehive has played. The new geyser has shortened its average interval to 13 $\frac{1}{2}$  minutes. The Castle continues to play about three times a week. The Giant played on the 7th, 15th and 24th. The Lion, Grotto, Oblong, and Sawmill played frequently but irregularly. The Riverside played every 6 $\frac{1}{2}$ -8 hours with an average interval of 7 $\frac{1}{2}$  hours. The Fan and the Mortar have developed no action in so many years that they may as well be considered "dead", and dropped from the list. The Lone Star geyser continues to play every 2 $\frac{1}{2}$ -3 hours.

At West Thumb: The Lake Shore geyser and one or two other small geysers were in operation at frequent intervals.



### Arrests and Violations of Law

The following arrests were made by members of the park force during the month of August:

August 1st. U. S. vs. Clarence B. Jacky of the Yellowstone Park Transportation Company. Exceeding speed limit. Fined by Canyon Rangers between Chittenden and Cascade Creek Bridges. Fined \$15.00 and costs of case, amounting to \$5.50.

August 9th. U. S. vs. Phil. Girard, of the Yellowstone Park Transportation Company. Exceeding speed limit. Arrested by Motorcycle Ranger E. Matthew. Fined \$15.00 and costs, amounting to \$1.85.

August 9th. U. S. vs. E. T. Johnson of the Yellowstone Park Transportation Company. Exceeding speed limit. Arrested by Motorcycle Ranger E. Matthew. Fined \$15.00 and costs amounting to \$1.85.

August 9th. U. S. vs. J. A. McGinnis, Yellowstone Park Transportation Company. Exceeding speed limit. Arrested by Motorcycle Ranger E. Matthew. Fined \$15.00 and costs amounting to \$1.85.

August 10th. R. R. Gillespie, Yellowstone Park Transportation Company. Exceeding speed limit. Arrested by Motorcycle Ranger E. Matthew. Fined \$15.00 and costs amounting to \$5.50.

August 16th. U. S. vs. H. J. Neely, San Francisco, California. Exceeding speed limit. Arrested by Motorcycle Ranger Russell Sprinkel. Fined \$15.00 and costs amounting to \$20.50.

August 20th. U. S. vs. B. Foreman, San Francisco, California. Exceeding speed limit. Arrested by Motorcycle Ranger Russell Sprinkel. Fined \$15.00 and costs amounting to \$20.50.

August 31st. U. S. vs. M. J. Gill, Minneapolis, Minnesota. Exceeding speed limit. Arrested by Motorcycle Ranger Leon D. Mink. Fined \$15.00 and costs amounting to \$5.50.

In addition to the above Mr. E. G. Cottle of Thermopolis, Wyoming, swore out a complaint against H. B. Lillard of the Yellowstone Park Transportation Company for reckless driving. Mr. Lillard was convicted and fined \$25.00 and costs amounting to \$7.50 and removed from the park by Superintendent Albright.

T. E. Keefe, Yellowstone Park Hotel Company, who was arrested in July for exceeding the park speed regulations was



fined \$15.00 and costs amounting to \$5.50.

#### Sickness and Medical Attention

Dr. W. E. Crawbuck, under his contract with the National Park Service, conducted his regular medical service in the park during the month of August and reports having made 93 professional calls on Government people and 32 calls on tourists.

Dr. B. C. Brooke, of the Helena Clinic, Helena, Montana, served as physician for the Hotel Company during the first two weeks of August and was relieved by Dr. Rudolph Korsky, of the same clinic, the latter two weeks of the month.

#### Accidents and Casualties

Although there has been a large increase in numbers of accidents over July, still there were remarkably few and only one was in the least serious: In considering the accident record for the season to date, the fact that the Transportation Company has hauled a total of 30,052 people through the park without a single person being injured due to any accident, is remarkable. There is no doubt but that this is the result to a great extent of careful checking on the part of rangers, which has forced the bus drivers to adhere more rigidly to schedules and consequently eliminated reckless driving.

On August 22nd the Studebaker car driven by Mr. E. E. Nelson of Los Angeles, California, attempted to pass the Ford driven by James Deem of Royalton, Kentucky. The road was too narrow and the Ford was knocked off the road into Spring Creek. Nelson was entirely at fault and agreed to pay Mr. Deem \$215 damages. No one was hurt seriously.

On August 28th, two cars had a collision at the bad turn at Virginia Cascades. Both cars were smashed up considerably. Ranger Finch proceeded to the scene and after an investigation concluded that the Chandler car bearing License California 248,708 was to blame for the accident as the other car, a Ford, California 465,127, was against the cliff, while the Chandler had three feet to spare. The case was settled among the parties themselves. The names were not obtained.

On August 9th, a Ford car, owned by F. Cutler of Des Moines, Iowa, had an accident on the hill behind the home of Mrs. C. Johnson. He was turning around on the hill above the house when his steering gear jammed and he ran down the hill



100 feet and struck a tree, turning the car over on its side. There were six persons in the car and none were injured. The car was slightly damaged. Driver's own fault.

On the evening of August 10th, a car backed off the road about 100 yards below the Tower Falls turn-off, on the road to Gardiner. The driver, Mr. McKinney, Assistant County Attorney, of Billings, Montana, was attempting to turn the car and in backing lost control of the machine and it went over the bank, turning over twice. Mr. McKinney and Mrs. McKinney were both bruised slightly, but were able to leave the next day. The car had a broken windshield and top but was not seriously damaged. Accident driver's own fault.

On August 13th a Ford car driven by W. O. Jacobson of Roundup, Montana, turned over on the Dunraven Pass road between the 3 and 4 mile posts from Tower Falls. There were three persons in the car; Mr. Jacobson, his wife and son about 10 years old. The man was slightly injured on the right arm. The woman had a compound fracture of the thumb and the middle finger was severed from the hand. The boy had a badly lacerated scalp, it being necessary to take 200 stitches in the scalp alone. He also had a bad cut in the neck, which missed one of the main arteries by about one fourth of an inch. His condition was not at first considered serious but complications set in and he died on the night of the 14th. The accident was caused by a broken axle.

On August 13th the car driven by M. A. Cline of Lovell, Wyoming, turned over on the Mt. Washburn road. The brakes on the car were not working and he was forced to hit the bank, turning the car over on its side. Mr. Cline suffered a compound fracture of the radius of the left arm. Accident fault of the driver.

Miss Alice Zimmerman, of Minneapolis, while walking around a hot mud pool on the left side of the road going towards Norris, about 1 mile south of Roaring Mountain, walked out on a ledge where she had been several times before, when the ledge broke and she fell in, becoming severely scalded to the waist. She was immediately taken to the Chico Hot Springs Hospital where she was given proper treatment.

In making a trip down Uncle Tom's Trail at the Canyon, Mrs. Langher (accompanying a camp party conducted by Miss Beaulah Brown) lost her footing and fell headlong down a slide of loose rock (approximately 75 feet). This accident occurred about 10 A.M. First aid was administered by Doctors Lewis Tupper



of Redford, Michigan, and Morrell Simpson of Bedford, Indiana, who were members of the above mentioned party. Mrs. Langher was conveyed to the top of the Canyon as quickly as possible under the prevailing conditions; she being able to climb, with assistance, over the steepest portions of the trail. The physicians mentioned above rendered immediate service when the camp was reached.

#### Special Accounting Conference

Pursuant to instructions from your office a conference of park executives was held in the Yellowstone for the purpose of adapting the new account classification system as set forth in Bulletin #1 of the General Accounting Office to the requirements of the National Park Service. The important particular of the work was the adaptation of the new system to cost accounts. The result of the conference was the preparation of a manual called the "Account Classification Manual" for use in accounting for all expenditures with reference to objects. Copies of the manual, which is still incomplete as regards the chapter on estimates, have been forwarded to you.

Those participating in the conference were: Superintendent W. B. Lewis of Yosemite Park, who arrived in Yellowstone Park on July 31st via the Eastern entrance and who left the park via the same gateway on August 17th; Accountant Noble J. Wilt, of the Washington Office, who arrived via West Yellowstone, July 21st and left via the Northern gateway on August 28th; Asst. Superintendent H. W. Hutchings of Glacier National Park, who arrived via the Northern gateway August 7th and left via the same gateway on August 18th; Asst. Superintendent E. P. Leavitt of Yosemite National Park, who arrived on August 9th and left on August 17th, coming and going via the Western entrance; Chief Clerk E. H. Carlson, of Mt. Rainier National Park, who arrived via the Northern entrance August 11th and who left via the Western entrance August 19th.

Besides working on the Account Classification Manual all of these men participated in the revision of their estimates for the 1924 fiscal year.

The accounting conference was conducted at headquarters. The secretary of the conference was Miss Julia S. Stockett, of my office. Occasional assistance was rendered by Assistant Superintendent Hill and by clerks P. E. Bilkert, A. R. Edwin and Joseph Joffe. Group pictures of those who participated in



the conference are attached hereto for your information and for the use of the Washington office. The second set is for Accountant Noble J. Wilt. In both pictures the members of the conference may be identified as follows:

Lower Row (Left to Right)

Superintendent W. B. Lewis of Yosemite Park; Miss Julia S. Stockett of Yellowstone; Superintendent Horace M. Albright of Yellowstone Park; Mr. Noble J. Wilt, Accountant of the Washington office; Mr. Percy Hill, Assistant Superintendent of Yellowstone Park.

Upper Row (Left to Right)

Mr. Joseph Jaffe, of the Yellowstone office; Mr. H. W. Hutchings, Assistant Superintendent of Glacier National Park; Mr. E. P. Leavitt, Assistant Superintendent of Yosemite Park; Mr. E. H. Carlson, Chief Clerk of Mt. Rainier Park; Mr. Peter E. Bilkert and Mr. A. R. Edwin, both clerks of the Yellowstone office.

The pictures were taken by Official Photographer J. E. Haynes and were given to us with his compliments.

Trip to Bechler River

On August 22nd I road over the route of the proposed Bechler River road with the following party: Engineer A. W. Burney, Chief Ranger S. T. Woodring, Edward H. Hays, President of the Camps Company, and Park Ranger R. C. Little.

We took horses at Lone Star Geyser, then followed the Firehole River to its headwaters in a small lake which lies under the Continental Divide. Thence, we crossed the Divide and went down Little's Fork of the Bechler a considerable distance, then crossed to the main fork and on to Three River Junction; thence, we went down the main Bechler River to the Ranger Station. This trip disclosed the fact that the main problem to be solved in a survey of the route will be that of drainage along the main Bechler River. No insuperable or extremely difficult obstacles to construction of the proposed road were found. At the Bechler River Station several members of the Ashton Chamber of Commerce joined us and the evening was spent in a discussion of the proposed new road.

The following day, August 23rd, we went to Cave Falls and then on to Ashton for lunch, which was tendered to us by the Chamber of Commerce. We return by automobile to West Yellowstone



the same afternoon, going by way of Henry Lake. We found sentiment in the Falls River country and in Ashton, Idaho, extremely favorable to the proposed new road and much interest in the park was indicated. The irrigation projects were not mentioned by anybody but we learned that several of the prominent promoters of the Falls River Basin project are now engaged in building a dam on Henry Lake at the head of the North Fork of the Snake River. We do not believe that the Falls River Basin project is entirely dead but it is rapidly expiring.

#### Y-4-B Line Convention

Pursuant to your instructions I represented the National Park Service at the Annual Convention of the Y-4-B Line Association which was held in Livingston on August 2nd. Mr. H. H. Hays, President of the Yellowstone Park Camps Company, also attended the convention and addressed the delegates. I spoke to the delegates at length on park road problems and told them of our proposed road budget which naturally greatly interested this group of men on account of the great need they feel for completing the road across Glacier Park. Mr. Scott Leavitt, President of the National Park to Park Highway Ass'n, and also President of the Y-4-B Line Highway Association, presided at the convention. In the course of the day many flattering remarks were made by delegates regarding the work of the National Park Service and the keenest interest in the work of the Service was indicated by all present.

#### Results of Primary Elections and Conventions in States Adjacent to The Park

On August 22nd primary elections in Wyoming meet with the following results:

Hon. F. W. Mondell and Hon. John B. Kendrick were nominated for U. S. Senator on the Republican and Democratic tickets, respectively. Governor Robt. W. Carey was defeated for re-nomination by Hon. John Hay, of Rock Springs, Wyoming. Hon. Chas. E. Winter was nominated on the Republican ticket for Congressman to succeed Hon. F. W. Mondell.

Montana on August 29th.

Hon. Carl F. Riddick, Republican, and Mr. B. E. Wheeler, Democrat, were nominated for Senator. Mr. Scott Leavitt, Republican, President of the National Park to Park Highway Association and the



Y-G-B Line Association, was nominated for Congressman in the Second District, defeating Jerome G. Locke who advocated the damming of Lake Yellowstone.

Idaho - on August 22nd.

Hon. C. C. Moore, of St. Anthony, Idaho - Lt. Governor - Republican, was nominated for Governor of the State on August 22nd. Governor Moore participated in the celebration of the Fiftieth Anniversary of the creation of the park on July 16th. Governor Moore will be opposed by Ex-Governor Moses Alexander of Boise. Representatives A. T. Smith and B. L. French were re-nominated.

#### Special Parties

A party composed of the following chief executives of the head camp (National Camp) of the Order of the Woodmen of the World entered the park via Cody, August 11th and left via Gardiner August 19th.

Mr. and Mrs. I. I. Beak, Denver.  
Mr. & Mrs. F. P. Hawks, Pueblo, Colo.  
Mr. & Mrs. J. O. Wilson, Portland, Ore.  
Hon. John Pattison, Spokane, Wash.  
H. J. Raymond, Denver, Colorado.

Congressman W. C. Hawley, of Oregon, also a member of the Executive Council, was scheduled to visit the park but was recalled to Washington on account of the re-opening of the sessions of the House of Representatives. These executives of the Woodmen of the World visited the park mainly for the purpose of ascertaining whether or not it would be feasible to hold a National Convention of the head camp in the park in 1924. The party was very enthusiastic over the park and the opportunities here for holding conventions, and tentative arrangements have been made subject to approval by all members of the Head Council to hold the convention here June 10-20, 1924, the idea being to have all of the sessions of the Order at Mammoth Hot Springs before the season opens. Then, on the opening day start around the park on the sight seeing tour. There will be approximately 300 people in this party and they will constitute tourist business that can easily be handled prior to the opening of the park.

Three hundred and ninety members of the American Bar



Association enroute to their convention at San Francisco visited the park August 4-6, inclusive, entering and leaving via West Yellowstone. A list of the members of this party is attached hereto. Included are many prominent members of the American Bar Association as you will observe by perusal of the attached list.

I would suggest that if possible you interview Justice Siddons of the District of Columbia Supreme Court who was in the party.

On the 4th, the day the party entered the park, I went to Old Faithful and extended greetings to two sections of the party who were at Old Faithful Inn for lunch. The other section, which was taken around the park in reverse of traffic (clock-wise) I met and greeted at Norris Geyser Basin. I again met the groups I saw at Old Faithful when they arrived at Mammoth Hot Springs for luncheon on August 6th and from these groups I learned that the party had had a most enjoyable trip with no unsatisfactory experiences. The highest praise was accorded the park management and the public utilities by everyone with whom I talked at Mammoth on the 6th.

This party, like the Walther League party that entered the park in July, had to be handled in several sections, being taken around the park in both directions in order to avoid the whole party getting into one hotel at the same time.

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The Buick Sales Organization: On August 6th and 7th the Pence Automobile Company, sales organization which distributes the Buick car in the Northwest, having headquarters in Minneapolis, held its annual convention at Mammoth Hot Springs. The Post Exchange Amusement Hall was used for the meetings of the organization. The 1923 models of the Buick cars were brought here for display and and by my permission were put in front of the information office where they were the object of close interest on the part of private motorists.

The Oregon Journal Party. The second Oregon Journal Party scheduled for a trip through the park during August was cancelled as a result of strike conditions.

Dr. Gordan M. Morrill, of Cleveland, Ohio, and party, entered via Cody July 25th, toured the Bechler and Falls River



region (Cascade Corner of the Park), leaving West Thumb July 31st. They finally left the park via the Upper Yellowstone about the middle of August.

Wyoming Teachers' Institute: The school teachers of Sweetwater and Lincoln counties, Wyoming, held their institute in the Park, entering the 28th of August and leaving the 1st of September. Attached to this report you will find a memorandum giving an account of the sessions held.

#### Special Visitors

Admiral Benson, former chairman of the U. S. Shipping Board, visited the park August 10-13, inclusive, coming in and going out West Yellowstone.

Mr. Edward E. Ayer, former U. S. Indian Commissioner, and friend of the National Parks, visited the park August 13-16, inclusive, coming in and going out Gardiner, the North entrance.

Supt. A. E. Dinsmore, of the St. Johnsbury Hierarchy, who entered the park July 25th via Gardiner, left via West Yellowstone August 15th.

Mr. H. E. Loran, head of the H. E. Loran Advertising Agency of New York and Chicago, visited the park August 16-19, inclusive, coming in and going out West Yellowstone.

Ex-Governor Chas. S. Whitman of New York, with Mrs. Whitman, visited the park August 1-4, inclusive, coming and going via West Yellowstone.

Mr. Leroy Jeffers, of New York, Secretary of the Ass'n Mountaineering Clubs, visited the park August 3-8, inclusive. Accompanied by Park Ranger W. H. Loyster Mr. Jeffers climbed Mt. Moran, altitude 12,100 feet, on August 5th and 6th.

Mr. Frank J. Taylor, of the Scripps-McRae Washington Bureau, and friend of Director Mather, spent August 15th and 16th in the park, using the Gardiner gateway in coming and going.

Major R. Hunter Clarkson, who is in charge of Fred Harvey's interests in the Grand Canyon National Park, entered via Gardiner August 1st and left via Cody August 13th. Mr. Clarkson made several trips around the park and conferred at length with officials of the public utilities and with me.



Dr. Henry B. Ward, of the University of Illinois, who has been in the park since the middle of June studying the Pelican with reference to the depredations on the fish of Lake Yellowstone, and also studying the parasites that infest some of the Yellowstone fish, completed his work and left via Gardiner on August 27th. His assistant, Mr. Hyatt, departed the same day.

The Rt. Rev. Bishop C. M. Beckwith, of the Diocese of Alabama, Episcopal Church, entered the park August 22nd, via West Yellowstone and left the 25th by the same gateway.

Mr. Harry C. James, president of one of the Denver banks and patron of the Denver Museum of Natural History, and friend of several national parks, particularly Mesa Verde, entered the park via Cody on August 25th and was in the park at the close of the month.

Mr. Thos. Stearns, former president of the Denver Civil and Commercial Association, toured the park in his own car, entering August 25th via Cody, and leaving via the southern gateway.

W. S. Basinger, Passenger Traffic Manager, and D. S. Spencer, General Passenger Agent, of the Union Pacific System visited headquarters August 20th and conferred with me on Yellowstone, Zion and Grand Canyon Park affairs.

Mr. W. C. Pary<sup>r</sup>, manager of the transportation line serving Grand Canyon and Zion National Parks, was in the park August 6th.

Mr. D. R. Hull, Landscape Engineer of the National Park Service, returned to the park on August 25th and is still here. Mrs. Hull accompanied Mr. Hull and remained four or five days.

Mr. Geo. E. Mushback, U. S. Game Warden of the Biological Survey, was in or near the park from August 22-25, inclusive.

Howard Fisher, youngest son of Ex-Secretary of the Interior Walter L. Fisher, with a friend, toured the park, arriving here August 1st. On completion of the tour the young man sought work and was employed until near the end of the month on a telephone crew where he did excellent work.

#### Motion Pictures

Motion picture permits to take scenic motion pictures during the season 1922 were issued to the following persons:



George F. Heffernan, of St. Louis, Missouri.  
L. M. Lewis of Chicago, Illinois.  
Dr. Heber J. Sears, of Salt Lake City, Utah.

### Entertainments

Pageants depicting the early history of the park and the development of transportation and other facilities for the accommodation of visitors were conducted in the permanent camps August 27-30, inclusive. The pageant lines were written by employees of the Camps Company and all of the characters of the pageants were drawn from the camp employees.

The pageant at Mammoth Hot Springs covered the early Indian life in the park and Indian traditions; the one at Old Faithful on the 28th, covered the early explorations by white men; and the announcement of the National Park idea by Cornelius Hedges; the pageant at Lake Camp on August 29th covered the debate in Congress on the bill proposing to create the park and the signing of the bill by General Grant; the Canyon pageant on the 30th covered the development of transportation in the park from pack outfits of the '70s, the various types of stage coaches of the '80s and '90s, to the magnificent Concord coaches of the past decade, and finally, the big automobile busses of the present time.

One of the interesting features of the Canyon pageant was the dance feature interpreting the spirit of the stage coach and the automobile. A beautiful girl dressed in the styles of the late '80s danced steps from a minuet, with the beautiful courtesies that accompanied that dance. She was followed by another beautiful girl dressed in the most exaggerated present day costumes, who danced to a jazz tune which very realistically interpreted a Yellowstone bus exceeding the speed limit.

All of the pageants were written and presented in further commemoration of the Fiftieth Anniversary of the establishment of the park.

### School

School is to open September 11th and Mrs. Laurie K. Harriott will have charge again this year. It is expected that there will be eighteen children in the school.



Religious Services

August 6th 10:30 A. M. The Rt. Rev. Bishop H. N. Fox,  
of the Episcopal Church of Montana.  
8:00 P. M. same

August 13th 10:30 A. M. Mr. W. Friend Day, Layman of the Episcopal Church, Emigrant, Montana.

8:00 P. M. Rev. Huxley, Baptist minister, Livingston, Montana.

August 20th 10:00 A.M. The Rt. Rev. Bishop Cheshire, of the Episcopal Church of North Carolina.

8:00 P.M. Rev. J. H. Groth, of the English Lutheran Church of Livingston, Montana.

August 27th 10:00 A.M. Mr. W. Friend Day, Layman of the Episcopal Church of Emigrant, Montana.

Mass of the Roman Catholic Church was read on the following dates  
by the priests mentioned below:

August 6th - Father Byrne of St. Thomas' Church, Chicago

6th - Father Geo. P. Ahrie, of North Dakota.

" 7th - Father Krauk

" 23rd) Father J. J. V. Organisciak, Tacoma, Washington.  
27th)

Post Office

Post Office Inspector C. F. Hansen, of Sheridan, Wyoming, visited the park officially, entering at the Cody gateway August 23rd and making the park trip. He spent the day on August 26th inspecting the post office at Park Headquarters, leaving the same evening via Gardiner, Montana. During his park trip Inspector Hansen observed the methods of handling mail by park concessioners in the upper park.

This is the first visit of an inspector since the post office was moved to a Government building last May, and Mr. Hansen was able to make several excellent suggestions relating to operation under the new conditions, and in connection with plans for future possible expansion to take care of increased business as travel increases.



### Circulars

Three circulars, Nos. 16, 17 and 18, were issued during the month of August, No. 16 relating to Accidents, No. 17 to Ranger Assignments, and No. 18 to the resignation of Dr. W. S. Crawbuck as park physician. Copies are attached hereto.

#### IX. RECEIPTS AND REMITTANCES

Enclosed is the monthly report of revenues due and collected and transmitted during August on the usual blank forms. The total amount collected as shown by the report is described as follows:

|                                                                                                                                                                                                    |        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| Certified check #947, dated August 17, 1922,<br>drawn by Howard H. Hays, on the North-<br>western National Bank, Livingston,<br>Montana, to the Director, National<br>Park Service, amount .. .. . | 165.96 |
| Certified check #256, dated August 10, 1922,<br>drawn by H. W. Child, on the National<br>Bank of Montana, Helena, Montana, to<br>the Director, National Park Service,<br>amount .. .. .            | 48.79  |
| Certified check #108, dated August 10, 1922,<br>drawn by H. W. Child, on the National<br>Bank of Montana, Helena, Montana, to<br>the Director, National Park Service,<br>amount .. .. .            | 149.95 |
| Certified check #3322, dated August 4, 1922,<br>drawn by Elizabeth Trischman, on Yegen<br>Bros. Bank, Gardiner, Montana, to the<br>Director, National Park Service, amount                         | 9.20   |
| Certified check #482, dated August 12, 1922,<br>drawn by J. E. Haynes, on Yegen Bros.<br>Bank, Gardiner, Montana, to the Director,<br>National Park Service, amount .. .. .                        | 23.80  |
| Postal Money Order #49871, dated August 5, 1922,<br>drawn by the Postmaster at Yellowstone,<br>Park, Wyoming, on the Postmaster at<br>Washington, D. C. amount .. .. .                             | 1.02   |

398.72



Revenues Received and Transmitted to  
Washington from sale of  
Automobile and Motorcycle  
Permits

August:

| <u>Entrance</u> | <u>Automobile</u> | <u>Motorcycle</u> | <u>Total</u>            |
|-----------------|-------------------|-------------------|-------------------------|
| North           | 16,920.00         | 47.50             | 16,967.50               |
| East            | 18,015.00         | 32.50             | 18,047.50               |
| South           | 3,840.00          | 7.50              | 3,847.50                |
| West            | 13,987.50         | 15.00             | <u>14,002.50</u>        |
|                 |                   |                   | 52,865.00               |
|                 |                   |                   | <u>398.72</u>           |
|                 | Total Revenue     |                   | <u><u>53,263.72</u></u> |

Cordially yours,

Horace M. Albright,  
Superintendent.

The Director,  
National Park Service,  
Department of the Interior,  
Washington, D. C.

HMA  
JSS  
BJF



DEPARTMENT OF THE INTERIOR  
National Park Service  
YELLOWSTONE PARK, WYOMING

August 24, 1922

CIRCULAR NO. 16

Hereafter when any employee of the National Park Service in Yellowstone National Park is injured or becomes sick, and it is necessary to take him to Chico Hot Springs or to any other sanitarium or medical establishment outside of the Park, the Superintendent's Office should be notified of the accident or sickness and should be requested to make arrangements for the care of the patient before he is sent from the Park.

The reason for this Circular arises from the fact that several patients have recently been sent to Chico Hot Springs without any prior arrangements, and on one occasion a patient got treatment from Dr. Townsend on the statement that he was a Government employee, whereas he was not in the employ of the Government. For the protection of Physicians and hospitals outside of the park, it is necessary that arrangements for medical care be made through the Superintendent's Office. Therefore, hereafter no Park employee will be sent to Chico Hot Springs or to any outside Physician without taking the matter up with the Superintendent, the Assistant Superintendent, or Mr. Joffe, the Superintendent's Secretary. Any of these three men will make the necessary arrangements and only in case that none of them are available at Mammoth Hot Springs, will patients be sent out without making arrangements for their care.

Of course, emergencies are likely to arise where it will be impracticable to follow the instructions of this Circular, and if it may be necessary to send a patient out without prior arrangement, but such emergencies will be few, and whoever takes the responsibility for sending the patient out must explain the situation to one of the above mentioned officers as soon as he can find one of them.

HORACE M. ALBRIGHT

Superintendent



DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
YELLOWSTONE NATIONAL PARK

August 26, 1922.

CIRCULAR NO. 17.

The following is a list of changes in the park ranger force, during the month of September. This includes dates for change of station by permanent rangers and termination of service by the members of the temporary force.

| NAME AND STATION         | RELEASED FROM SERVICE                    | TRANSFER TO                       |
|--------------------------|------------------------------------------|-----------------------------------|
| <u>MAMMOTH STATION</u>   |                                          |                                   |
| L. T. Scoyon             |                                          | Western District, Oct. 1st.       |
| Ed. Burkett              |                                          | Subject orders Chief Ranger       |
| L. T. Frazier            |                                          | To Riverside, Sept. 20th.         |
| Edward Rynearson         | Sept. 1st                                |                                   |
| L. W. King               | Sept. 1st                                |                                   |
| L. D. Moore              | Sept. 15th                               |                                   |
| L. G. Cottier            | Sept. 15th                               |                                   |
| Edward Cogswell          | Sept. 15th                               |                                   |
| Frank Thome              | Sept. 15th                               |                                   |
| Wm. Troutman             | Sept. 1st                                |                                   |
| L. Lindsley              | Sept. 15th                               |                                   |
| Geo. A. Grant            |                                          | To Grevice, Oct. 1st              |
| <u>MORRIS STATION</u>    |                                          |                                   |
| Red C. Finch             |                                          | Soda Butte, Sept. 20th            |
| Geo. M. Vandaveer        | Sept. 10th                               |                                   |
| <u>MADISON JUNCTION</u>  |                                          |                                   |
| Alfred Toevs             | Sept. 10th                               | To Mammoth, Sept. 1st.            |
| <u>RIVERSIDE STATION</u> |                                          |                                   |
| L. McLaughlin            |                                          | To Gardiner, Sept. 21st           |
| L. S. Ferris             |                                          | To Bechler River, Sept. 20th      |
| <u>WEST YELLOWSTONE</u>  |                                          |                                   |
| Sam Huxless              | Retain until services no longer required |                                   |
| L. G. Ewing III          | Sept. 10th                               |                                   |
| L. T. Needham            |                                          | To Muir Woods, Sept. 1st          |
| <u>GALLATIN</u>          |                                          |                                   |
| Clifford Anderson        |                                          | No change                         |
| L. D. Shelton            | Sept. 15th                               | Relieved from station Sept. 10th. |
| <u>GARDINER</u>          |                                          |                                   |
| Ed C. Pound              |                                          | No change                         |
| L. McCormick             | Sept. 15th                               |                                   |
| L. Brien                 | Indefinite                               |                                   |



| NAME AND STATION     | RELEASED FROM SERVICE | TRANSFER TO                      |
|----------------------|-----------------------|----------------------------------|
| <u>CREVICE</u>       |                       |                                  |
| W. H. Loyster        |                       | No change                        |
| <u>TOWER FALLS</u>   |                       |                                  |
| F. L. Carter         |                       | To Snake River, Sept. 11th       |
| G. Everett Young     | Sept. 10th            |                                  |
| H. D. McFaddin       | Sept. 15th            |                                  |
| <u>SODA BUTTE</u>    |                       |                                  |
| Jas. Dupuis          |                       | To Tower Falls, Sept. 10th       |
| M. R. Black          | Sept. 5th             |                                  |
| <u>DUNRAVEN PASS</u> |                       |                                  |
| T. P. Chittenden     | Sept. 15th            |                                  |
| R. N. Barnard        | Sept. 5th             |                                  |
| <u>CANYON</u>        |                       |                                  |
| Lee Webb             |                       | To Riverside, Sept. 25th         |
| C. P. Donohoe        | Indefinite            |                                  |
| S. W. Davis          | Sept. 15th            |                                  |
| M. L. Larson         | Sept. 10th            |                                  |
| P. R. Wylie          | Sept. 15th            |                                  |
| <u>LAKE</u>          |                       |                                  |
| E. S. Bowman         |                       | No change                        |
| H. Anderson          |                       | To headquarters, Sept. 20th      |
| Ed. Lethen           | Sept. 1st             |                                  |
| R. D. Baker          | Sept. 1st             |                                  |
| W. S. Keate          | Indefinite            |                                  |
| <u>THUMB</u>         |                       |                                  |
| Luther Custer        |                       | To Thorofare, Sept. 20th         |
| E. Silburn           | Sept. 10th            | To Lake, Sept. 1st               |
| <u>SNAKE RIVER</u>   |                       |                                  |
| Wm. N. Purdue        |                       | To Soda Butte, Sept. 5th         |
| Jas. Wilson          |                       | To Lake, Sept. 25th              |
| Chester L. Butler    |                       | To Headquarters, Sept. 10th      |
| <u>BECHLER RIVER</u> |                       |                                  |
| R. G. Little         |                       | Resignation effective Sept. 15th |
| Lee Cottrill         |                       | To Snake River, Sept. 25th       |



| NAME AND STATION         | RELEASED FROM SERVICE           | TRANSFER TO                       |
|--------------------------|---------------------------------|-----------------------------------|
| <u>OLD FAITHFUL</u>      |                                 |                                   |
| T. Bicknell              |                                 | To Bechler River, Sept. 20th      |
| Robertson                | Sept. 15th                      |                                   |
| has. Mueller             | Sept. 15th                      |                                   |
| S. Sager                 | Sept. 5th                       |                                   |
| S. Downs                 | Indefinite                      |                                   |
| D. Lansdowne             | Services terminated August 19th |                                   |
| m. Alcorn                | Sept. 5th                       |                                   |
| <u>FOUNTAIN</u>          |                                 |                                   |
| John Delmar              | Sept. 15th                      | Furlough under W.A.E. appointment |
| Geo. Poland              | Sept. 1st                       |                                   |
| John W. Delmar           | Sept. 15th                      |                                   |
| <u>UPPER YELLOWSTONE</u> |                                 |                                   |
| Geo. Winn                |                                 | No change                         |
| <u>MOTORCYCLE PATROL</u> |                                 |                                   |
| Sprinkel                 | Sept. 10th                      |                                   |
| Matthew                  | Sept. 15th                      |                                   |
| Matthew                  | Sept. 15th                      |                                   |
| D. Mink                  | Sept. 15th                      |                                   |
| <u>SYLVAN PASS</u>       |                                 |                                   |
| R. R. Wisdom             |                                 | No change                         |
| W. S. Lilly              | Sept. 10th                      |                                   |
| D. McMurray              | Sept. 1st                       |                                   |



DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
YELLOWSTONE NATIONAL PARK

August 30, 1922.

CIRCULAR NO. 18

Announcement is hereby made that Dr. William E. Crawbuck, Official Park Physician, is severing his connections with Yellowstone National Park to undertake post-graduate work in medicine and surgery in the East.

It appears at this time that Dr. Crawbuck will be succeeded by Dr. J. Meek Wolfe, of Big Timber, Montana, who has practiced several years in Big Timber, and prior to coming West, ten years in Roanoke, Virginia.

HORACE M. ALBRIGHT  
Superintendent



DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
YELLOWSTONE NATIONAL PARK  
YELLOWSTONE PARK, WYOMING

AUGUST NOTES ON THE FLOWERS

During early August, summer is at its height on the Park plateau and on the high mountains. But before the end of the month heavy frosts are apt to occur and autumn begins on the high peaks and gradually creeps down from the heights to the Park plateau, where most of the tourist routes lie. While the fields of blossoms on Mt. Washburn and our other peaks are now wonderful to behold, they have not the resisting capabilities of our earlier flowers and the frosts and droughts soon cut them down.

The big, yellow *Mentzelias* are still wonderful below Mammoth. Geraniums, Asters, Rocky Mountain Bee Plants, Sunflowers, Goldenrod, and some Lupines are in bloom below 7000 feet altitude. Here and there, Cedar berries and choke Cherries are ripening. So also, are the wild Red Raspberries but the birds and bears do not leave many for our eating.

On the Park plateau from 7000 to 8000 feet, Cinquefoil, Lupines, Groundsel, purple, yellow and golden Asters of many varieties, Yarrow, Harebells, Fringed Gentians, Beardtongues and Penstemons generally, both yellow and red Snapdragons, Indian Paint Brush, Umbrella Plants, Wild Buckwheat and Wild Parsley are the flowers chiefly responsible for the great masses of color marking roadsides and forests. Besides the yellow Water Lily, the only lilies left in bloom are one or two varieties of wild Onions. Recent rains have enabled the Little Elephants to continue on the dampest meadows, and Lungwort in the shady glens. The tall, purple spikes of Monkshood decorate the damp places, and the Fireweed is flaming everywhere along the roads. Strawberries, Gooseberries, Snowberries, Salmonberries, and Service Berries are ripening everywhere. The higher pine forests are matted beneath with masses of low Huckleberry shrubs and the tiny red berries are ripening. Altho different from the Eastern Huckleberry in size and color, they have the same taste and other properties. In other parts of the forests, Wintergreen and Kinni-kinick berries are reddening, especially toward the the end of the month.

It is the high mountains that carry our glorious flower gardens in August. The hills of the lowest elevations are dry and turning brown, but the highest mountain meadows are a glorious mosaic of color. Brilliant, scarlet Paint Brush, White Phlox, Alpine Yarrow, Buttercups, Purple Asters, and the ever-present lupines form pictures of great beauty. But towards the end of August the first frosts will begin to blight the blossoms, and to color the leaves of Baneberry, Mountain Ash, Willow and the higher Aspens.

AUGUST NOTES ON GEOLOGY

At Mammoth, JUPITER TERRACE is holding its great improvement and beauty. ANGEL TERRACE is very beautiful and active at four different points. The WHITE ELEPHANT is holding the fine, varied color that it acquired in 1921. At the ORANGE SPRING, a small opening has formed this year on top and throws a tiny jet fifteen inches high; the small cone to the east of the mound continues to discharge hot water surcharged with gas. MOUND TERRACE is increasing and improving in color. CLEOPATRA TERRACE continues to be as beautiful as ever. MINERVA TERRACE shows a very fine stalactitic growth. The most prominent development is a fine spring and terrace forming on the northern part of the old MARBLE TERRACE.

At Norris Geyser Basin, the CONSTANT Geyser is playing every minute. The WHIRLIGIG continues to play from both old and new craters. The BATHTUB is a quiet, boiling pool of clear water. The MUD GEYSER has become uncertain. The MINUTEMAN Geyser plays irregularly at from one to five minute interval. The MONARCH has not played for over a year. The VALENTINE plays at long intervals.

The FOUNTAIN Geyser is uncertain but the GREAT FOUNTAIN is playing as usual every 8-10 hours, and the WHITE DOME is getting stronger and plays once every hour.

In the Upper Geyser Basin, the intervals of OLD FAITHFUL are from 60 to 70 minutes. The DAISY continues to play quite regularly every 70-80 minutes. The GROTTTO plays at frequent intervals, but there is no regularity as to its period between eruptions, or as to duration of eruptions. The GIANT is giving wonderful displays every 7-15 days. The GIANTESS should play every two to four weeks. The BEEHIVE should play once or twice following the Giantess; a small geyser ten feet east of the main Beehive cone plays twenty minutes before the larger geyser erupts. A new geyser that promises to attract a great deal of attention has begun operations about 300 feet south of the Giantess; it is small yet but it plays regularly every twenty minutes. The GRAND still continues its wonderful activity; no indicator has been discovered but this geyser plays every 9-12 hours. The displays last 15-30 minutes and consists of six to twelve separate eruptions. The CASTLE usually plays three to five times at one day interval and is then quiet for a week or so. The spurts thrown out ten to thirty feet high at short intervals are **not** an indication of approaching activity. The RIVERSIDE geyser is very regular every 7 to 8 hours. The LONE STAR geyser is giving fine displays every three hours, with a long series of preliminary eruptions extending over an hour and a half before each main eruption.



## AUGUST NOTES ON THE ANIMALS

The show herd of 18 fine BUFFALO bulls are on view at the Corral near Mammoth. So far, a hundred lives have made their appearance in the tame herd this year. The wild herd, too, has been found to be flourishing.

MOUNTAIN SHEEP are on the high mountains but occasionally seen on Mt. Washburn. Young lambs are now two months old.

ANTELOPE are quite frequent near Tower Falls and Camp Roosevelt. The little kids are now three months old and quite as speedy as their parents. Horns of the adults are full grown.

ELK are on the high mountains to get away from the flies. Not apt to be seen along the tourist routes but short trips into the forest glades or up the mountains should disclose a few. The horns will be full grown about the middle of the month but still covered with skin. The calves are two months old, and still spotted with round, white spots. A small band of elk are in the corral near the Buffalo bulls at Mammoth.

DEER might be seen in ones and twos at almost any point throughout the trip. Horns are full grown but still covered with skin. The fawns are three months old and still spotted with white.

BEAVER are shy but might be seen at almost any point in the evening but not in daytime. In Willow Park, along the Firehole River, near the Yellowstone River bridge below Tower Falls, and beside the road from T. J. 12 miles from that junction and 6 miles from Mammoth, are the most likely places. They have now mostly left their houses and dams to lead a more or less wandering life until autumn.

COYOTES are common enough and often seen, but wolves and mountain lions are too rare to accommodate the tourists.

BLACK, BROWN, and CINNAMON BEARS are all the same species, just as we have black, white and yellow cats. They are to be seen about the dumps near Old Faithful, Lake, Canyon, and Mammoth, and in addition might be seen at almost any point along the roads and trails. The cubs are now six months old, having been born a month or more before the parents left their places of hibernation. No matter how friendly they seem, all bears are subject to dangerous fits without warning. **LEAVE 'EM ALONE!**

GRIZZLIES are comparatively rare but might be seen about the dumps near Lake and Canyon after sunset and sometimes before sunrise. Not apt to be seen in daytime.

## AUGUST NOTES ON THE BIRDS

August is a very unsatisfactory month to study our birds. The season of song and bright plumage is over; most of the young birds have been cared for and are out of the nest; the old birds are moulting and consequently most morose; and finally it is so warm that the bulk of the birds remain all day in cool, shady retreats.

Fall migration has begun with the arrival of the willet and solitary sandpiper. Soon the other shore birds and waders will come down from their northern homes, and the swallows will leave us during the last week of the month.

The presence of young birds will prove very confusing in the effort to identify our birds. Only a few of the warblers, the swallows, the night hawks, and mountaineers of the robin, bluebird and junco species are still nesting. At the osprey nest on Eagle Nest Rock the young are almost grown. In the Grand Canyon of the Yellowstone there are two nests easily seen below Inspiration Point, each with two nestlings hatched out in early July; and a nest below Grand View where three young osprey were hatched about July 10th. Besides these, there are about twenty other nests of osprey in the Canyon between the Upper Falls and Inspiration Point but mostly well hidden and not so easily found. There is another nest on a ledge beside the East entrance road about five miles from Lake Junction. During early August the ospreys will be seen on the nests shielding their young with half-raised wings from the fierce rays of the hot sun. It has been a favorable year for the broods of geese and ducks. Large numbers of Canada geese are on Rebe Lake and at the south end of the Yellowstone Lake. Mallards and blue wing teal are in numbers on the marshes south of Yellowstone Lake. White pelicans and gulls are nesting on Molly Island and this month the young pelicans and gulls begin to leave their nests.

## THE NATIVE, OR, BLACKSPOTTED TROUT

This is sometimes called the Cut-throat trout because of the red mark along the lower edge of the gill-fans. It is a native of the Rocky Mountains and is peculiarly abundant in the Yellowstone Lake and River, Snake River, Heart Lake and all their tributaries. It is an active, cold water trout, but does not grow to large size. It varies a good deal in color in different localities; but its upper parts always have small black spots, which sometimes extend evenly from the nose to the tail. Its food consists of all sorts of creatures living in the water and of insects which accidentally fall in from above.

Approved:

HORACE M. ALBRIGHT,  
SUPERINTENDENT.

M. P. SKINNER,  
PARK NATURALIST



Department of the Interior  
National Park Service  
Yellowstone National Park

(For release ON RECEIPT)

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Yellowstone Park, Wyoming, September 4.- Yellowstone Park's new geyser, which "blew up" several weeks ago, breaking all geyser records for height of its stream and violence of its eruption, is performing again.

After the first few days of activity the new geyser, which has been unofficially called the "Semi-Centennial", since it chose the fiftieth anniversary of the Park's creation to assert itself, quieted down and only gave occasional spurts of steam and muddy water to remind Park visitors of its previous performances in flooding the automobile highway and scattering boulders around about for a radius of a hundred feet or more.

Last week, however, the geyser commenced operating again and has since been playing at irregular intervals several times a day. The spouts on these occasions reach various heights between 100 and 200 feet. Several times, also, it has thrown mud and water on the roadway which runs beside the muddy hot pool where the geyser has its source.

The new phenomenon is proving a great attraction to motor parties from cities nearby the Park. Since the spouter resumed activities, scores of parties have been driving in in order to be able to witness the new geyser display before the close of the Park season.



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